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# Assessment of the Preferred Rural Infrastructural Needs of Rural Households in Benue State, Nigeria

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*Abstract— The study critically assessed the preferred rural infrastructural needs of households in Benue state, Nigeria. Primary data were used in collecting data for the study, through Questionnaire administration, in-depth interview and physical observation. This was done to elicit responses from households as regard their rural infrastructural preferences. A multistage sampling technique was used to draw the sample size of 212 households. Tables, frequency distribution and one sample t-test was used to analyze the degree of rural infrastructural preference to households needs. The result from the socio-economic characteristics of households revealed that, 32.5% were of the age group of 41-50; 17.5% were of age group of 25-30; 11.3% were of age group of 51-60 and 3.8% were of the age group of 61-70 respectively. As regard household size, more than half of respondent 56.1% had household size class range of 6-10 persons, 42.5% had household size class range of 1-5persons and 1.4% had household size class range of 11-15persons respectively. 27.4% had farm size of 1-3hectares and 1.4% had farm size of 6.1-10 respectively. 34.91% had annual income range of ₦100,001-₦200,000; 17.92% had annual income class range of ₦42,000-₦50,000; 3.30% had annual income range of ₦2001, 000-₦500,000; and 0.94% had annual income range of ₦500,001-₦850,000. The result of the preferred rural infrastructural needs at state and local government level revealed that, rural households infrastructural needs differ significantly from one household and geographical area to the others in Benue state, Nigeria which is significantly due to difference in human wants, choice and taste. Therefore the study recommends that; The lopsidedness pattern of infrastructural development should be avoided and equality in infrastructural development and provision be given more attention by adopting a discriminate investment strategy in infrastructural provision that will favour the under-privileged areas, this will help not only to promote the spirit of distributive justice but also it will go a long way to foster regional balance in our developmental efforts in the state and local government areas at large. Finally, government should encourage the adoption of community development strategy. This has been successfully done in Tanzania.*
*Keywords— infrastructure, preferred, assessment, rural, households.*

## I. INTRODUCTION

**Background to the study**

Infrastructures are elements in the package of basic needs, which a community would like to procure for better living and satisfaction of their infrastructural needs. [ADB *et al, (*2005)] and [Cook *et al*, (2005)] both opined that, the fundamental importance of infrastructure in rural development cannot be overestimated being that, the provision and distribution of rural infrastructure has for long been seen as a government concern at federal, state and local governments level. According to Okafor (1985) who asserted that no two communities, individual may need the same thing infrastructure because human want are different. It is therefore necessary for the government to be sensitive to the different ecological situations and seek to develop the communities along a direction the rural people can well appreciate as regard to their needs and wants of the different communities since they differ in nature and degree of their

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preferences, since the villages by their nature lack the fund, power and political will to decide on the type and quantity of their rural infrastructural needs. Several studies have been carried out on infrastructure development as it affect different aspect of the economic, but none has tried to critically assess the infrastructural preference as it relates to households needs. It is against this backdrop that, this study "Assessment of the Preferred Rural Infrastructural Needs of Rural Households in Benue State, Nigeria" is carried out to validate the hypothesis that, there is no significant effect of rural infrastructural preferences on households in Benue state.

**Objective of the study**
The broad objective of the study was to assess the preferred rural infrastructural needs of rural households in Benue State of Nigeria. While, the specific objectives to;
  i.     determine the socio-economic characteristics of households in the study area;
  ii.    assess the preferred rural infrastructural needs of household at council wards in Benue state of Nigeria;
  iii.   assess the preferred rural infrastructural needs of household as a whole in Benue state Nigeria;
  iv.

**Statement of the Problem**
Unified utility systems of rural infrastructural distribution are critical for the self-satisfaction and sustainability of rural households in different ecological settings. But the uneven distribution of rural infrastructures in different ecological zones leads to the less development of some rural areas to the other. it is remarked that, rural infrastructural facilities that should serve as a catalyst to household drive towards self-satisfaction are simply not equal in quantity and quality perhaps constitute rural infrastructural deficit amongst households since human wants are different from one place to the other. This lack of uniformity in distribution infrastructural needs at different household or wards is attributed to corruption, negligence of the part of local government supervisory team, bureaucratic system of government and lack of equal budgetary allocation, lopsidedness by government in providing the basic infrastructures has pose a lot of underdevelopment of other areas than others.

## II.     METHODOLOGY
**Research Design**
The framework for this study was derived from public opinion survey design. This chapter describes the procedures used in the collection of information from the respondents for the study. The design of the study was discussed under the following headings: Study area, Population of the study, Sample and sampling technique, Instrument of data collection, Validation of instrument, Reliability of instrument, and Methods of data collection, Variable specification/Model specification and Data analysis techniques.

**The Study Area**
 The study was conducted in Benue state Nigeria. The State is popularly known as *"food baskets of the nation"* has a geographical coordinate of latitudes 6˚ 25' and 8˚ 08' N, and between longitudes 7˚ 47' and 10˚ 00' E in the central part of Nigeria called 'Middle belt' (Nyagba, 1995). The State has a population of 4,253,641 people according to 2006 Census (NPC, 2006) and has a land mass of 32,518sqkm. Benue State has 23 LGAs namely Ado, Agatu, Apa, Buruku, Gboko, Guma, Gwe- East, Gwer -West, katsina-Ala, Konshisha, Kwande, Logo, Makurdi, Obi, Ogbadibo, Ohimini, Oju, Okpokwu, Otukpo, Tarka, Ukum, Ushongo and Vandeikya. The State shares boundary with Nassarawa State to the North, Taraba to the Northeast, in the South by Cross River State. It also bound with Enugu and Ebonyi State in the southwest while Kogi State lies to the West. A short international boundary with the Republic of Cameroon is shared by Kwande Local Government Area. It also has several ethnic groups namely; Tiv, Idoma, Iyede, Etulo, Abakpa, Jukum, Hausa, Akweya and Nyifon.
Climatically, the State belongs to the Koppen's Aw climate group and experiences seasonal wet and dry seasons. The rain falls for seven months from April to October with total annual amount ranging between 12,000 - 20,000mm while dry season sets in November and ends in March (Ologunorisa and Tersoo 2006; Nyagba, 1995). Temperatures are constantly high averaging between 28˚ - 32˚C and sometimes rising to 37˚C especially within Makurdi the state headquarters. The vegetation of Benue State still possesses relics of the guinea savanna with coarse grasses and numerous species of scattered trees. These trees included *Khaya senegalensis* (Mahogany) which is found in the southwestern part, mostly along stream courses while

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*Daniella oliveri* (chiha) and *Isoberlina doka* (akovol) are found mostly in the North-East and North-west parts of the State respectively. Other tree species such as *Parkia biglobosa* (Locust bean tree), *Prosopsis africana* (Iron tree), *Vitellaria paradoxa* (Shea butter tree), Burkea africana and oil bean tree are also common (Nyagba 1995; Hula 2009).

However persistent clearance of the vegetation for arable agriculture, lumbering and the practice of bush fallowing system create regrowth and characteristic parklands that attract animal grazing and cattle herdsmen. Dense forests are very few and far apart in the State and exist either as gallery forest, village forest or forest reserves (Nyagba 1995). Agriculture forms the back bone of the State economy, engaging more than 70% of the population. The State also has an advantage of being located across both the forest zone where tree crops are grown and the savanna where mainly grains are cultivated.

### Population of the Study
The total number of respondents for this study was 3513 households.

### Sample and Sampling Techniques
The target population for the study was rural farm households in the three agricultural zone of Benue state Nigeria. The study employed multistage sampling techniques in selecting the numbers of farm family households for the study. In the first stage, the study area was limited to the 3 Agricultural zones and one LGA was purposively selected in each agricultural zone. These were Central zone (Otukpo LGA), Eastern zone (Katsina-ala LGA) and Northern zone (Gwer-east LGA). In the Second stage specifically; one Local Government Area was purposively selected from the 3 agricultural zones namely; Otukpo LGA from Central agricultural zone, Katsina-ala LGA from Eastern agricultural zone and Gwer-east LGA from Northern agricultural of Benue state. The selection is based on the presence of agricultural activities carried out in the zones. Third stage was random selection of three (3) council wards from each local government area selected in stage two above. Fourth stage, a 6% sampling proportion was drawn from the total number of households in all the selected wards to obtain a total sample size of 212 farm households for the study.

### Instrument of Data collection
Questionnaire administration, in-depth interview and physical observation were instrument for data collection.

### Validation of the Instrument

The term validation refers to the degree to which a measuring instrument measures what it is designed to measure. According to Ndiyo (2005) Validation is defined in relation to the measuring instrument. Validity of measuring instrument is defined as the ability of the instrument to measure what it is to measure. To ensure that the questionnaire passes both face and content validity test..

### Reliability of instrument
Reliability of instrument is the extent to which measurement are repeated when different people perform the same measurement, on different occasions, under different conditions, with supposedly alternative instrument which measures the same thing. In sum, reliability is consistency of measurement (Bollen, 1989), or stability of measurement over a variety of conditions in which basically the same result should be obtained (Nunnally, 1978). A test retest method will be used to test the reliability of the instrument. Ten copies of the questionnaires will be administered to a group of ten people and the responses will be recorded. After an interval of two weeks, ten copies of the questionnaires will be administered to the same group of people and the responses correlated with those of the first. A mean Pearson correlation coefficient from 0.75 will mean the instrument is reliable.

### Method of Data Collection
This study involved the collection of data from primary sources. The primary source of data collection was done through structured questionnaires and in-depth interview.

### Data Analysis Techniques
The data collected for this study was analyzed using both descriptive and inferential statistics. Descriptive statistics such as tables, frequencies and percentages was employed to analyze objective (i); while, one sample t-test was used to analyze objective (ii) and (iii) using 4 point Likert scale format.

### Variables Specification/Model Specification
**Age:** the numbers of years of an individual has existed on earth. It will be measured in number.

**Gender:** the two main categories into which humans are divided on the basis of their reproductive function. It will be measured as a dummy, Male = 0 Female = 1.

**Marital Status Rural Households:** this will be measured as I = Married, 2= single, 3= widower/widow 4= separated.

**Years Spent In School:** this will be measured as the number of years spent in acquiring formal education.

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**Households Sizes:** the number of persons in the households measured in number.

**Annual Income**: the total amount of money earned by households from agricultural activities. It will be measured in naira (₦).

**Farm Size:** Measure in hectares (ha.) as land area used in agricultural production.

**Preferred Rural Infrastructural Needs:** Measured as 4-mostly preferred, 3-preferred, 2-less preferred and 1-not perceive as prioritized using one sample t-test arranged/established using 4-point Likert scale.

## III. RESULT AND DISCUSSION

**Socio-Economic Characteristics of Respondents**

The socio-economic characteristics of respondent in the study area are summarized in table 1. It was revealed that, majority of households sampled 64.6% were male 35.4% were female. The result revealed that, household's heads are mostly male and are more concerned about rural infrastructure than their female counterpart. This reveals the need for more infrastructures which will definitely increase access and patronage particularly for women who are in most cases indoors. The result agrees with the earlier findings of Oboh *et al.,* (2009), in a study revealed that, male are mostly involved in the prioritization of their rural infrastructural needs in Oju LGA of Benue state.

As for Age, the mean age of respondents in the study area was 40.8868 Indicating that, most respondents 34.9% were of the age group 31-40; 32.5% were of the age group of 41-50; 17.5% were of age group of 25-30; 11.3% were of age group of 51-60 and 3.8% were of the age group of 61-70 respectively. The result indicates that majority of respondents fell within the active working class indicating that households in the study area have an active labour force which they use to carry out meaningful economic ventures in identifying and developing of their rural areas they live in. This finding is in consonance with that of Umeh and Attaborh (2006) revealed that, most farmers are still young people who are still strong and full of energy to make meaningful impact in agricultural production.

The distribution of respondents by marital status in the study area revealed that, majority 67.9% were married, 16.5% were single, 10.8% were widow/widower, and 4.7% were divorced. This indicates the importance attached to marriage institution in the study area. The result also implies that,

since there were many married and few unmarried persons. Rural infrastructures such as the maternity centers and educational facilities should be provided and be made available in order to cater for the expected increasing numbers of children. This result is in agreement with the earlier findings of Okwu and Umoru (2009), in a study in Apa LGA of Benue state titled, 'A study of women farmers agricultural information needs and accessibility' reveals that majority 69.20% of respondent were married, 15.4% were single, 12.3% were widow/widower and 3.1% were divorcees.

Distribution by years spent in school by respondents in the study area revealed the mean spent in school as 6.3538 indicating that, majority of respondents sampled 31.6% had primary education, 30.2% had secondary education, 26.9% of respondents had no formal education and only 11.3% had tertiary education in the study area. This indicate that majority of the respondents in the study area were literate and could read and write. The result is in agreement with the earlier findings of Uboh *et al.* (2009) that majority of households could read and write thereby helping them in the identification and prioritizing rural infrastructures to generate desired benefit.

Analysis of households sizes in the study area revealed that the mean household size was 5.7453 indicating that, Majority of households 56.1% had households sizes of (6-10) members, 42.5% had households size class range of 1-5 members and 1.4% had households sizes class range of 11-15 members respectively. This is evident because, in rural environment where agriculture is the main economic activity, the sizes of households play a very important role in the supply of family labour for immediate family employment Adeoye *et al.* (2011). This result was in agreement with National Average Household Size (NBS, 2007) that, the average number of persons to a household and was also supported by Ogundele and Okoruwa (2006) that family labour constitute the major proportion of aggregate labour used on the farm.

Distribution of farm sizes in the study area revealed a mean farm size of 2.7623 hectares indicating that, majority 71.2% of respondents had farm sizes of 3.1-6 hectares, 27.4% had farm sizes of 1-3hectares and 1.4% had farm sizes of 6.1-10 respectively, this indicates that, most households are small scale farm holders. The finding is in agreement with the earlier findings of Odoemenem and Inakwu (2011) who

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reviewed that, most farmers in Benue state are mostly small scale farmers.

Furthermore, analysis of annual income of households revealed a mean annual income of ₦214,220 indicating that, majority of respondents 42.92% had annual income class range of ₦50,001 - ₦100,000., 34.91% had annual income range of ₦100,001 - ₦200,000., 17.92% had annual income class range of ₦42,000 - ₦50,000., 3.30% had annual income range of ₦2001,000 - ₦500,000., and 0.94% had annual income range of ₦500,001 - ₦850,000., these implies that

majority of respondents focuses largely on farm enterprise by using the existing rural infrastructures available to them to boast agricultural output and farm income. This study agrees with the earlier findings of Umeh *et al. (2013)* they found that majority of farmers in Apa LGA in a study "Socio-economic characteristics of poverty among small scale farmers in Apa LGA, Benue state Nigeria" had an annual farm income ranging from ₦81,000 - ₦100,000. The result further reviewed that, majority of farmers in the study area focused on farm enterprise.

*Table 1: Percentage Distribution by Socio-Economic Characteristics of Rural Households*

| VARIABLES | FREQUENCY | PERCENTAGE | MEAN |
|---|---|---|---|
| **GENDER** | | | |
| Male | 175 | 64.6 | |
| Female | 75 | 35.4 | |
| **TOTAL** | **212** | **100** | |
| **MARITAL STATUS** | | | |
| Married | 144 | 67.9 | |
| Single | 35 | 16.5 | |
| Widower/widow | 23 | 10.8 | |
| Divorce | 10 | 4.7 | |
| **TOTAL** | **212** | **100** | |
| **AGE** | | | |
| 25-30 | 37 | 17.5 | **40.8868** |
| 31-40 | 74 | 34.9 | |
| 41-50 | 69 | 32.5 | |
| 51-60 | 24 | 11.3 | |
| 61-70 | 8 | 3.8 | |
| **TOTAL** | **212** | **100** | |
| **EDUCATIONAL LEVEL IN YEARS** | | | |
| 0 | 57 | 26.9 | **6.3538** |
| 1-6 | 67 | 31.6 | |
| 7-12 | 64 | 30.2 | |
| 13-20 | 24 | 11.3 | |
| **TOTAL** | **212** | **100** | |
| **HOUSEHOLDS SIZE** | | | |
| 1-5 | 90 | 42.5 | **5.7453** |
| 6-10 | 119 | 56.1 | |
| 11-15 | 3 | 1.4 | |
| **TOTAL** | 212 | 100 | |
| **FARM SIZES** | | | |
| 1-3 | 58 | 27.4 | **2.7623** |
| 3.1-6 | 151 | 71.2 | |
| 6.1-10 | 3 | 1.4 | |

| TOTAL | 212 | 100 | |
|---|---|---|---|
| **ANNUAL INCOME** | | | |
| ₦42,000-₦50,000 | 38 | 17.92 | **₦214,220** |
| ₦50,001-₦100,000 | 91 | 42.92 | |
| ₦100,001-₦200,000 | 74 | 34.91 | |
| ₦200,001-₦500,000 | 7 | 3.30 | |
| ₦501,000-₦850,000 | 2 | 0.94 | |
| **TOTAL** | **212** | **100** | |

**Preferred Infrastructural Needs of Rural Households in the Study Area**

The preferred rural infrastructural needs of rural households in Benue state is summarized in table 2 using one-sample t-test and 4-point Likert scale arrangement to determine the order of preference using t-value of 1.5 as a benchmark. The figures in parenthesis are the t values.

It was revealed that, the preferred rural infrastructural needs of households in Benue state were, transportation network which was significant and ranked 1st as the most preferred rural infrastructure with a mean of 1.7594 (t=10.484), Storage facilities was significant and ranked 2nd as prioritized rural infrastructure with a mean of 1.4481 (t=4.859), water supply was significant and ranked 3rd as less prioritize rural infrastructure with a mean of 1.2877 (t=4.398 ), healthcare facilities was ranked 4th as not perceived as prioritized with a mean of 1.0330 (t= 0.398) and not significant. Power supply, Education facilities, financial institution, Research institute, Irrigation facilities and telecommunication were all not perceived as prioritized by households in the study area. The result is in agreement with the earlier findings of Oboh *et al.* (2009) which revealed the rural infrastructural needs in OJU LGA in a study "farmers involvement and prioritization of their infrastructural needs in Oju LGA, found that road network were ranked 1st, storage were ranked 2nd, power supply were ranked 3rd, healthcare were ranked 4th, irrigation facilities were ranked 5th, schools were ranked 6th and telephone services was ranked 7th.

*Table 2: The Preferred Rural Infrastructural Needs of Rural Farm Households in Benue State Nigeria*

| State | Preferred infrastructural needs | Mean | Std deviation | Std error mean | T | DF | Sig(2-tailed) | Ranking |
|---|---|---|---|---|---|---|---|---|
| | Transportation network | 1.7594 | 1.05474 | .07244 | 10.484 | 211 | .000 | 1 |
| | Storage facilities | 1.4481 | 1.34275 | .09222 | 4.859 | 211 | 0.000 | 2 |
| | Water supply | 1.2877 | .95254 | .06542 | 4.398 | 211 | 0.000 | 3 |
| | Health care facilities | 1.0330 | 1.20969 | .08308 | 0.398 | 211 | 0.691 | 4 |
| Benue state | Power supply | .9198 | 1.22694 | .08427 | -0.952 | 211 | 0.342 | 5 |
| | Educational facilities | .7547 | 1.23773 | .08501 | -2.885 | 211 | 0.04 | 6 |
| | financial institution | .4953 | 1.11643 | .07668 | -6.582 | 211 | 0.000 | 7 |
| | Research institute | .4953 | 1.11643 | .07668 | -6.582 | 211 | 0.000 | 8 |
| | Extension workers | .4481 | 1.06746 | .07331 | -7.528 | 211 | 0.000 | 9 |
| | Irrigation facilities | .4953 | .79433 | .05455 | -14.180 | 211 | 0.000 | 10 |
| | Telecommunication facilities | .07 | .456 | .031 | -29.649 | 211 | 0.000 | 11 |

**Ranking**: in order of t-test using t-value of 1.5; 4-mostly preferred, 3-preferred, 2-less preferred and 1-not perceive as prioritized.

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### Preferred Rural Infrastructure by households by Council wards in Benue state

The distributions of preferred rural infrastructural needs of rural households by council wards are summarized in Table 3. it was observed that, the preferred rural infrastructural needs of households in Ikurav-tiev ii ward of Katsina-ala LGA were, water supply which was significant and ranked 1st as the most preferred rural infrastructure with a mean of 3.1667(t=6.782), transportation network was significant and ranked 2nd as prioritized rural infrastructure with a mean of 2.2083(t=2.455), power supply was ranked 3rd as less prioritize rural infrastructure with a mean of 1.3750(t= -.455) and storage was ranked 4th as not perceive and prioritized with a mean of 1.0833(t= -1.266) and not significant. Extension workers, financial institution, Research institute, Education facilities, Irrigation facilities and telecommunication were not significant and were not perceived as prioritized by households in Ikura Tiev ii ward in study area.

**Note;** Figures in parenthesis are the t-values.

The preferred rural infrastructural needs of households in Michehe ward of Katsina-ala LGA were, transportation network which was significant and ranked 1st as most prioritized with a mean of 2.7391(t=4.618), water supply was significant and ranked 2nd with a mean of 2.5652(t=3.003) as prioritized, power supply was also significant ranked 3rd with a mean of 1.7391(t= .975) as less prioritized and storage facility was not significant and ranked 4th as not perceived as prioritized with a mean of 1.3913(t= -371). However Healthcare facility, telecommunication, financial institution, irrigation facility and extension services were all not perceived as prioritized by households in Michehe ward of katsina-Ala. **Note;** figures in parenthesis are the t-values.

The preferred rural infrastructural needs of households in Mbajir ward of Katsina-ala LGA were, power supply was significant and ranked 1st as most prioritized rural infrastructure with a mean of 3.1250(t=6.488), water supply was significant and ranked 2nd as prioritized with a mean of 2.9167(t=4.715), storage was ranked 3rd and significant with a mean of 1.7500(t=1.141) and transportation network was significant and ranked 4th as not perceived as prioritized. Health care facility, extension facility, financial institution, research institute, educational facility and irrigation facilities were all not perceived as prioritized by rural household in Mbajir ward of Katsina-ala in study area. **Note;** figures in parenthesis are the t-values.

The preferred rural infrastructural needs of households in Okete ward of Otukpo LGA were, water supply was significant and ranked 1st as most prioritize with a mean of 3.7917(t=27.062), transportation network was ranked 2nd as prioritize rural infrastructure and significant with a mean and t-value in parenthesis as 2.8750(t=7.113), educational facilities was ranked 3rd as less prioritized infrastructure and was not significant with a mean of 1.1250(t= -2.042) and health care facility was ranked 4th as not perceived as prioritized and not significant with a mean of 0.7500(t= -3.715). Storage facilities, research institute, financial institution, financial institution, power supply, telecommunication, irrigation facility and extension facilities were not priotized by households in Okete ward of Otukpo LGA in Benue state. **Note;** figures in parenthesis are the t-values.

The preferred rural infrastructural needs of households in Ogbuju- ehaje ward of Otukpo LGA were, transportation network was significant and ranked 1st as most prioritize rural infrastructure with a mean of 3.0455(t=9.229), health care facility was ranked 2nd as prioritized and significant with a mean of 2.5909(t=10.168), water supply was not significant and ranked 3rd as less prioritize with a mean of 1.6364(t=0.318), storage facility was ranked 4th as not perceived as prioritized and not significant with a mean of 1.0909(t=-1.052). Educational facility, extension services, irrigation facility, power supply, telecommunication, financial institution, and research institute were all not perceived as prioritized by households in Ogbuju Ehaje in Otukpo LGA. **Note;** figures in parenthesis are the t-values.

The preferred rural infrastructural needs of households in Ewulo ward of Otukpo LGA were, Educational facility was significant and ranked 1st as most prioritize rural infrastructure with a mean of 2.7083(t=3.578), transportation network was ranked 2nd as prioritize rural infrastructure and significant with a mean of 2.3333(t=2.027), health care facility was ranked 3rd as less perceived as prioritized and significant with a mean of 1.6667(t=0.595) and water supply was not significant and ranked 4th as not perceived as prioritize with a mean of 0.7500(t= -2.769). Storage facility, power supply, extension services, financial institution, research institute and irrigation facility were all not perceived as prioritized by households in Ewulo ward of Otukpo LGA.

The preferred rural infrastructural needs of households in Aliade Mbalav ward of Gwer-east LGA were, transportation

network which was significant and ranked 1st as most prioritize rural infrastructure with a mean of 2.9583(t=7.151), water supply was significant and ranked 2nd as prioritized with mean of 2.8333(t=4.873), storage facilities was significant and ranked 3rd as less prioritized with a mean of 2.0833(t=2.070) and power supply was ranked 4th as not perceived as prioritized but not significant with mean of 0.750(t= -2151). Healthcare facilities, educational facilities, extension services, research institute, financial institution, irrigation facility were all not perceived as prioritized as all by households Aliade Mbalav ward in Gwer east in Benue state.

The preferred rural infrastructural needs of households in Ugee ward of Gwer-east LGA were, water supply which was significant and ranked 1st as most prioritized rural infrastructure with a mean of 2.8333(t=7.125), health care facility was ranked 2nd as prioritize by households of Ugee ward and significant with a mean of 2.8333(t=4.290), power supply was ranked 3rd and significant with a mean of 1.6250(t=0.426) and transportation network ranked 4th and not significant with a mean 1.0833(t= -1.514). Educational facility, telecommunication, research institute, financial institution, irrigational facility and extension facility were all

not significant and not perceived as prioritized by households in Ugee council ward in Gwer east LGA in the study area. **Note;** figures in parenthesis are the t-values.

Finally, The preferred rural infrastructural needs of households of Mbasombo ward in Gwer-east LGA were, water supply was significant and ranked 1st as most prioritize with a mean of 3.2609(t=10.426), transportation network was ranked 2nd as prioritize rural infrastructure and significant with a mean of 2.8261(t=5.930), storage facility was ranked 3rd as less prioritized and significant with a mean of 1.6522(t=0.633) and health care facilities was not significant and ranked 4th as not perceived as prioritized by households in Mbasombo ward. Research institute, financial institution, educational facility, irrigation facility, power supply and telecommunication were all perceived as not prioritized by household in Mbasombo ward in Gwer east LGA in the study area. **Note;** figures in parenthesis are the t-values.

The following finding above is in line with the earlier finding of Okafor (1985) which reveals in his study that, several community differ in the nature and degree of their infrastructural needs. He further stressed that; Every community may not necessarily need the same thing which may be due to difference in ecological situations.

*Table 3: Assessment of Preferred Rural Infrastructural Needs of Rural Households by Council Wards in Benue State*

| Wards | Ranking | Rural infrastructure preference | Mean | Std deviation | Std error mean | T | Df | Sig(2-tailed) |
|---|---|---|---|---|---|---|---|---|
| **Ikurav-tiev ii** | 1 | Water supply | 3.1667 | 1.20386 | .24574 | 6.782 | 23 | .000 |
| | 2 | Power supply | 1.3750 | 1.34528 | .27460 | -.455 | 23 | .653 |
| | 3 | Healthcare facilities | 1.0833 | 1.61290 | .32923 | -1.266 | 23 | .218 |
| | 4 | Storage | 1.1250 | 1.32902 | .27129 | -1.382 | 23 | .180 |
| | 5 | Extension workers | .3333 | .76139 | .15542 | -7.507 | 23 | .000 |
| | 6 | Financial institution | .2917 | .62409 | .12739 | -9.485 | 23 | .000 |
| | 7 | Research institute | .1667 | .38069 | .07771 | -17.158 | 23 | .000 |
| | 8 | Education facilities | .1250 | .33783 | .06896 | -19.939 | 23 | .000 |
| | 9 | Irrigation facilities | .0833 | .28233 | .05763 | -24.582 | 23 | .000 |
| | 10 | telecommunication | .00 | .000a | .000 | - | - | - |
| **Michehe** | 1 | Transportation | 2.7391 | 1.28691 | .26834 | 4.618 | 22 | .000 |
| | 2 | Water supply | 2.5652 | 1.70096 | .35468 | 3.003 | 22 | .007 |
| | 3 | Power supply | 1.7391 | 1.17618 | .24525 | .975 | 22 | .340 |
| | 4 | Storage | 1.3913 | 1.40580 | .29313 | -.371 | 22 | .714 |
| | 5 | Healthcare facilities | 1.0435 | 1.42950 | .29807 | -1.532 | 22 | .140 |
| | 6 | Telecommunication | .30 | .703 | .147 | -23.522 | 22 | .000 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 7 | Education facilities | .1304 | .34435 | .07180 | -19.074 | 22 | .000 |
| | 8 | Financial institution | .0870 | .28810 | .06007 | -33.500 | 22 | .000 |
| | 9 | Irrigation facilities | .0435 | .20851 | .04348 | -33.500 | 22 | .000 |
| | 10 | Extension workers | .0435 | .20851 | .04348 | -8.158 | 22 | .000 |
| **Mbajir** | 1 | Power supply | 3.1250 | 1.22696 | .25045 | 6.488 | 23 | .000 |
| | 2 | Water supply | 2.9167 | 1.47196 | .30046 | 4.715 | 23 | .000 |
| | 3 | Storage | 1.7500 | 1.07339 | .21911 | 1.141 | 23 | .266 |
| | 4 | Transportation | 1.7083 | .90790 | .18532 | 1.124 | 23 | .273 |
| | 5 | Healthcare facilities | .1250 | .44843 | .09153 | -15.022 | 23 | .000 |
| | 6 | Extension workers | .2083 | .41485 | .08468 | -15.253 | 23 | .000 |
| | 7 | Financial institution | .1250 | .33783 | .06896 | -19.939 | 23 | .000 |
| | 8 | Research institute | .1250 | .33783 | .06896 | -19.939 | 23 | .000 |
| | 9 | Education facilities | .0417 | .20412 | .04167 | -35.000 | 23 | .000 |
| | 10 | Irrigation facilities | .0417 | .20412 | .04167 | -35.000 | 23 | .000 |
| **Okete** | 1 | Water supply | 3.7917 | .41485 | .08468 | 27.062 | 23 | .000 |
| | 2 | Transportation | 2.8750 | .94696 | .19330 | 7.113 | 23 | .000 |
| | 3 | Education facilities | 1.1250 | .89988 | .18369 | -2.042 | 23 | .053 |
| | 4 | Healthcare facilities | .7500 | .98907 | .20189 | -3.715 | 23 | .001 |
| | 5 | Storage | .5000 | 1.14208 | .23313 | -4.290 | 23 | .000 |
| | 6 | Research institute | .5000 | .78019 | .15926 | -6.279 | 23 | .000 |
| | 7 | Financial institution | .4583 | .50898 | .10389 | -10.026 | 23 | .000 |
| | 8 | Power supply | .0000 | .00000[a] | .00000 | - | - | - |
| | 9 | Telecommunication | .00 | .000[a] | .000 | - | - | - |
| | 10 | Irrigation facilities | .0000 | .00000[a] | .00000 | - | - | - |
| | 11 | Extension workers | .0000 | .00000[a] | .00000 | - | - | - |
| **Ogbuju Ehaje** | 1 | Healthcare facilities | 2.5909 | .50324 | .10729 | 10.168 | 21 | .000 |
| | 2 | Transportation | 3.0455 | .78542 | .16745 | 9.229 | 21 | .000 |
| | 3 | Water supply | 1.6364 | 2.01295 | .42916 | .318 | 21 | .754 |
| | 4 | Storage | 1.0909 | 1.82337 | .38874 | -1.052 | 21 | .305 |
| | 5 | Education facilities | .6364 | .95346 | .20328 | -4.249 | 21 | .000 |
| | 6. | xtension workers | .4091 | .50324 | .10729 | -10.168 | 21 | .000 |
| | 7. | Irrigation facilities | .3182 | .47673 | .10164 | -11.628 | 21 | .000 |
| | 8. | Power supply | .0000 | .00000[a] | .00000 | - | - | - |
| | 9. | Telecommunication | .00 | .000[a] | .000 | - | - | - |
| | 10. | Financial institution | .0000 | .00000[a] | .00000 | - | - | - |
| | 11. | Research institute | .0000 | .00000[a] | .00000 | - | - | - |
| **Ewulo** | 1 | Education facilities | 2.7083 | 1.65448 | .33772 | 3.578 | 23 | .002 |
| | 2 | Transportation | 2.3333 | 2.01444 | .41120 | 2.027 | 23 | .054 |
| | 3 | Healthcare facilities | 1.6667 | 1.37261 | .28018 | .595 | 23 | .558 |
| | 4 | Water supply | .7500 | 1.32698 | .27087 | -2.769 | 23 | .011 |
| | 5 | Storage | 1.0417 | .69025 | .14090 | -3.253 | 23 | .004 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 6. | Power supply | .6667 | .96309 | .19659 | -4.239 | 23 | .000 |
| | 7. | Extension workers | .3750 | .76967 | .15711 | -7.161 | 23 | .000 |
| | 8. | Financial institution | .2083 | .50898 | .10389 | -12.432 | 23 | .000 |
| | 9. | Research institute | .2500 | .44233 | .09029 | -13.844 | 23 | .000 |
| | 10. | Irrigation facilities | .0417 | .20412 | .04167 | -35.000 | 23 | .000 |
| **Aliade** | 1 | Transportation network | 2.9583 | .99909 | .20394 | 7.151 | 23 | .000 |
| | 2 | Water supply | 2.8333 | 1.34056 | .27364 | 4.873 | 23 | .000 |
| | 3 | Storage | 2.0833 | 1.38051 | .28179 | 2.070 | 23 | .050 |
| | 4 | Power supply | .750 | 1.42379 | .29063 | -2.151 | 23 | .042 |
| | 5 | Healthcare facilities | .3333 | .63702 | .13003 | -8.972 | 23 | .000 |
| | 6 | Education facilities | .2500 | .60792 | .12409 | -10.073 | 23 | .000 |
| | 7 | Extension workers | 1.667 | .48154 | .09829 | -13.565 | 23 | .000 |
| | 8 | Research institute | .2083 | .41485 | .08468 | -15.253 | 23 | .000 |
| | 9 | Financial institution | .1667 | .38069 | .07771 | -17.158 | 23 | .000 |
| | 10 | Irrigation facilities | .1250 | .337833 | .06896 | -19.939 | 23 | .000 |
| **Ugee** | 1 | Water supply | 2.8333 | .91683 | .18715 | 7.125 | 23 | .000 |
| | 2 | Healthcare facilities | 2.8333 | 1.52277 | .31083 | 4.290 | 23 | .000 |
| | 3 | Power supply | 1.6250 | 1.43898 | .29373 | .426 | 23 | .674 |
| | 4 | Transportation | 1.0833 | 1.34864 | .27529 | -1.514 | 23 | .144 |
| | 5 | Storage | 1.0000 | 1.25109 | .25538 | -1.958 | 23 | .062 |
| | 6 | Education facilities | .4167 | .71728 | .14641 | -7.399 | 23 | .000 |
| | 7 | Telecommunication | .00 | .000[a] | .000 | - | - | - |
| | 8 | Research institute | .1250 | .33783 | .06896 | - | - | - |
| | 9 | Financial institution | .0833 | .28233 | .05763 | -24.582 | 23 | .000 |
| | 10 | Irrigation facilities | .0000 | .00000[a] | .00000 | -19.939 | 23 | .000 |
| | 11 | Extension workers | .0000 | .00000[a] | .00000 | - | - | - |
| **Mbasombo** | 1 | Water supply | 3.2609 | .81002 | .16890 | 10.426 | 22 | .000 |
| | 2 | Transportation | 2.8261 | 1.07247 | .22363 | 5.930 | 22 | .000 |
| | 3 | Healthcare facilities | 1.3043 | 1.71715 | .35805 | -.546 | 22 | .590 |
| | 4 | Research institute | .3043 | .55880 | .11652 | -10.262 | 22 | .000 |
| | 5 | Financial institution | .1739 | .38755 | .08081 | -16.410 | 22 | .000 |
| | 6 | Extension workers | .1739 | .38755 | .08081 | -16.410 | 22 | .000 |
| | 7 | Education facilities | .2174 | .51843 | .10810 | -11.865 | 22 | .000 |
| | 8 | Irrigation facilities | .0435 | .20851 | .04348 | -33.500 | 22 | .000 |
| | 9 | Power supply | .0000 | .00000[a] | .00000 | - | - | - |
| | 10 | Telecommunication | .00 | .000[a] | .000 | - | - | - |

**Ranking:** in order of t-test using t-value of 1.5. 4-mostly preferred, 3-preferred, 2-less preferred and 1-not perceive as prioritized.

## IV.   CONCLUSION AND RECOMMENDATION

The study critically assesses the preferred rural infrastructural needs of rural households in Benue state, Nigeria. The finding of this study reveals that, households' preference to rural infrastructures differs greatly from one household to the other as a result of human wants, choice and taste. Therefore, the researcher recommends that; The lopsidedness pattern of infrastructural development should be avoided and equality in infrastructural distribution be given more attention by adopting a discriminate investment strategy in infrastructural provision that will favour the under-privileged areas and this will help not only to promote the spirit of distributive justice but also it will go a long way to foster regional balance in our developmental efforts in the state and local government areas at large. Finally, government should encourage the adoption of community development strategy. This has been successfully done in Tanzania.

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