Spatial Distribution of Infrastructural Facilities in Ekiti State.

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ABSTRACT: One of the major problems inhibiting the development process in Nigeria is the inadequate provision of infrastructural facilities which is further compounded by the lack of reliable information of their number and spatial distribution. Hence this paper was aimed toassess the spatial pattern and distribution of existing infrastructure in Ekiti state.An inventory of the existing infrastructure such education, administration, commercial, public utility, transportation, health, recreation and communication.Mean deviation, location quotient and nearest neighbour analysis to evaluate the distribution of these facilities.The result of the analysis shows that disparity exists among the LGAs.It was observed that LGAs like Efon, Ikere, Irepodun and Moba are lagging in education infrastructure, while other LGAs has these facilities more than expected.Virtually all the LGAs has public utility but Ikere LGA is less privileged while commercial facility such as bank is less expected in all the LGAs expect Ado LGA. This paper concludes by suggesting that future researches should examine in more detail the role of rural infrastructure on social development of rural areas by laying emphasis on the quality of the infrastructure rather than quantity, so as to figure out the true dimension of the development.
KEYWORDS: Infrastructural Facility,under-served areas,GIS

I.   INTRODUCTION

The provision of basic infrastructures is a part of integrated strategy which combine the development of various spheres of life including agricultural, educational, health, nutrition, electrification, water supply and cooperatives simultaneously (Oyewole and Oloko, 2006). Functionally infrastructure facilitates; the production of goods and services, the distribution of finished products to end-users (markets) are the basic right of the people. In developed countries telecommunications, electricity, and water are used in the production process of nearly every sector, and transport is an input for every commodity. This demonstrates infrastructures is, if not the engine that runs the economic and society in general. The part of infrastructural facilities in the general societal development and improvement can't be overemphasized. UN (2011) had stated that infrastructure assumes a basic part in poverty diminishment, economic development and employment for the majority. Additionally, Calderon, 2009; Egbetokun, 2009 emphasised that the arrangement of infrastructures is a piece of incorporated procedure which join the advancement of different circles of life including horticultural, instructive, wellbeing, sustenance, water supply and cooperatives all the while. In a similar vein, (Oyewole and Oloko, 2006) had observed that insufficient infrastructures can decrease the cost of creation which influences efficiency, level of yields, and business.

It is obvious that demand for these facilities is higher while resources are limited. With the ever-growing population and urbanisation menace, there is need to create an environment for economic growth and provision of a sustainable development (UN, 2011). Hence, Spatial disparities in the level of development are the results of uneven distribution of natural resources and regional differences in the history of human development(Adefila & Bulus, 2014). This led to unequal access to the basic infrastructures such as schools, health centres, potable water, good feeder roads, culverts, storage and irrigation facilities (Fakayode et al, 2008). The phenomenon of inequality is widely common within developing countries especially in Nigeria. Inequalities are most apparent between the commercial, industrial and urban centres on the one hand and extensive agricultural and poor rural areas on the other hand. The former is generally better provided with both quality and quantity of essential services to the neglect of the rural areas.In addition, inadequate and low qualities of infrastructures could have serious implication for welfare and persistence of standard of living in our society(Odeyemi & Olamide, 2013). It is obvious that one cannot expect rapid socio-economic development without adequate provision for infrastructural facilities and also the critical factors that contributed to the high level of development is the proper location and allocation of these facilities (Edun, Akinde, Olaleye, & Idown, 2013).

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spatial distribution. These Infrastructure are not evenly spread over space because certain environmental factors, operation of economic, cultural and political processes often produce areas of concentration and specialization(Awosusi & Jegede, 2013). Hence continuous inventory and catalogue of these facilities is the only option for an effective planning and sustainable development.

Several attempts have been made to resolve these problems among which was the inventory of community-based infrastructure facilities in the 1990s (The Presidency, 1991)where the federal government did a spatio-temporal inventory of infrastructure facilities at 449 LGAs and four development area in the FCT in which 110,257 communities were identified and surveyed.While the endeavours of the government and other agencies are admirable, there is an issue with the spatial stock and documentation of these facilities. At the end of the day, it is extremely troublesome anytime to get-up and coming, coordinated and thorough data on all these infrastructures which were situated in the different groups. Henceforth, it is hard to evaluate on the fly such data as which infrastructure is the place, when was it commissioned, who provided it, when was it last serviced, when is it due for another adjusting, what is the current state, what is the limit of populace that can be served, and so on. This data is indispensable for basic leadership at the different levels and when they are missing, precise planning for infrastructure arrangement and upkeep turns out to be extremely troublesome particularly in Nigeria (Bulus & Adefila, 2014).

The above issue spread to the states and local level, where lack of inventory on the available facilities, inadequate provision, maintenance of infrastructural facilities and that the poor state of existing infrastructure in many areas have pose a great challenge to economic particularly level of agricultural and industrial productivity in Ekiti state (Abumere, 2002). Ekiti State is an agrarian state. This implies that majority of the people live in rural areas where farming is their major activity and source of income. It is a relatively small, physically compact and ethnically homogeneous state which, for a long time has been the source of agricultural produce for the large cities in Southwestern Nigeria. It is also one of the largest producers of cocoa in Nigeria, hence, infrastructural facilities that should serve as catalyst in the process of agricultural production are either not available or inadequate and can impede socio-economic transformation (Adeoye, et al, 2011).

The primary concern of this paper is to lay emphasis on the level of spatial balance in infrastructural development and to undertake a comparative analysis of the pattern of distribution among the sixteen local government areas in Ekiti State.

II. MATERIAL AND METHODS

An inventory of the existing infrastructure which included educational infrastructure (Primary schools, Secondary school, Tertiary institution and nomadic schools), commercial infrastructure(Market, Banks)administration (Local government secretariat, Townhall and palace), public utility (water, electricity, Police station, Libraries and religious centre), transport, communication infrastructure as well as health and recreational infrastructure(Hotels and guest houses, Parks and sport facility)were grouped into Education, administration, commercial, public utility, transportation, health, recreation and communication. Spatial information was acquired through a Germin GPS and other information was acquired through a structured questionnaire, field observation, pictures and focus group discussion. Also, mean deviation was used to assess the disparity between each facility at different local government.

In other to measure the concentration of infrastructure, location quotient (LQ) was employed. Location quotient is a ratio that compares a region to a larger reference region according to some characteristic or asset (EMSI, 2009). Temporarily, population figures were used to determine the LQ in the study instead of areal extent since the facilities are meant to serve people (Diggle, 1990., Madu, 2012,).

$$LQ = \frac{xi / \sum_{i=1}^{n} x}{pi / \sum_{i=1}^{n} p} - - - - - - - - - (1)$$

Where:
xi is the number of facilities for the i^{th}LGA and
pi is the number of population for the ith LGA

Also, nearest neighbour analysis was done to evaluate the spatial distribution of infrastructure in relation to the local government area extend, more also, average nearest neighbour (ANN) method is very sensitive to the Area value (small changes in the Area parameter value can result in considerable changes in the z-score and p-value results.

$$ANN = \frac{\sum_{i=1}^{n} di}{\frac{0.5}{\sqrt{n/A}}} - - - - - - - - (2)$$

Where
di is the distance between facility i
n is the number of facilities
A is the area boundary in meters. *Source: Mitchell.,2005*

when a LQ equals to or exceeding 1 indicates that the ward has achieved a comparatively more significant level of social development using the development indicators, while an LQ less than 1 indicates that the ward is disadvantaged.Meanwhile, when ANN index is less than 1, the pattern exhibits clustering; if the index is greater than 1, the trend is toward dispersion (Mitchell.,2005). Hence, this study, quantifies the relative concentration of infrastructure in every LGA as compared to the areal and population at each local government.

III.   RESULTS AND DISCUSSION OF FINDINGS
3.1   Inventory of Infrastructural Facilities within Ekiti State
Provision of infrastructural facilities is very important for the improvement of the standard of living of the people, however, the study revealed that virtually all the local government were provided with necessary infrastructural facilities, though most of these facilities were not in full operation during the time of survey. The summary of all the infrastructure facilities is shown in Appendix I.

3.1.1   Education Facilities
The number and location of schools in any locality would depend on the type of population distribution which could be characterized as being either dispersed or nuclear. No thought that the distribution of these facilities cannot be even and spatially distributed, however the creation of basic educational facilities (Primary and Secondary education) is very fundamental to the development of the community, local government and the state level. As observed in table 1, and figure 1, the capital (Ado-Ekiti) has the highest number of primary, secondary and tertiary education facilities with 159, 49 and 4 respectively, seconded by Ijero local government with 88 primary schools, 27 secondary schools and a technical school, Ikole local government has a close figure with Ijero with 84 primary school, 38 secondary schools and a technical school. Meanwhile, the least local government with these facilities were Efon LGA with 24 primary school, 9 secondary school and a college.

Table 1: Educational Facilities within each Local Government

LGAs	Nomadic Schools	Primary School	Secondary School	Tertiary Institution	Technical Education	Theology/Colleges and Others	Total	Mean Deviation
Ado	1	159	49	4	1	2	216	126.875
Efon	0	24	9	0	0	1	34	-55.125
Ekiti East	1	61	23	0	0	0	85	-4.125
Ekiti Southwest	0	76	25	1	1	1	104	14.875
Ekiti West	1	71	21	0	0	0	93	3.875
Emure	0	36	10	0	0	1	47	-42.125
Gbonyin	0	57	31	0	1	0	89	-0.125
IdoOsi	0	58	30	3	2	3	96	6.875
Ijero	0	88	27	0	1	1	117	27.875
Ikere	0	65	19	0	0	0	84	-5.125
Ikole	1	84	38	0	1	0	124	34.875
Ilejemeje	0	24	14	0	0	0	38	-51.125
Irepodun/Ifelodun	0	53	20	0	0	1	74	-15.125
Ise-Orun	0	51	21	0	0	0	72	-17.125
Moba	1	41	15	0	1	0	58	-31.25
Oye	1	72	22	0	0	0	95	5.875
Total	6	1020	374	8	8	10	1426	

Source: Field Inventory 2009

This research also shows some disparity in allocating this infrastructure. Figure 1 shows the disparity in the distribution of EF. It is observed that Efon, Gboyin, Ekiti East, Moba, Ikere, Ilejemeji, Irepodun/Ifelodun and Ise orin LGAs are below the average count (89) of all the educational facility.
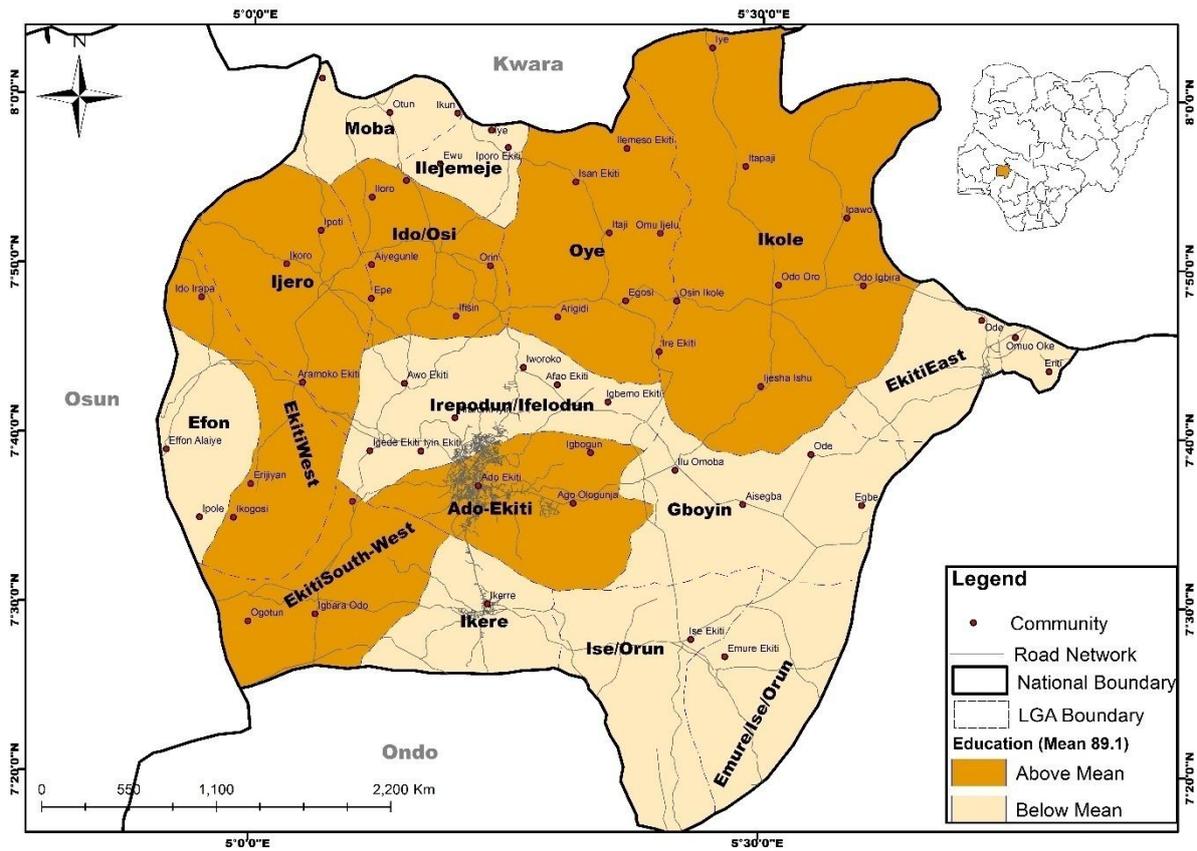
Figure 1: Mean Deviation of Educational Facilities

3.1.2 Commercial Infrastructure

The availability of social or commercial infrastructure like banks and other financial institutions will encourage the provision of credit and other financial services to small scale business and farmers. three categories of banks were found at different LGA. such as commercial banks, Agricultural banks and microfinance banks. The total number of banks in Ekiti state was 107 of which 78 were commercial banks, 17 were microfinances, 9 were insurances, 2 were Agricultural banks, and amortgagebanks. However, 41 percent of the banks are located at the capital (Ado-Ekiti) with 31 commercial banks, 3 Microfinance, 9 insurances and a Mortgage bank as shown in table 2. Meanwhile Ilejemeje LGA only has one commercial bank (Spring bank). however, the development of the agriculture areas which could boost famer's input and output was at the lowest point, where inventory shows that there were only 2 Agricultural banks were available within the state as a whole. More also, there were only 13 LGAs that has the minimum of 6 banks within the state.

Table 2: Bank facilities within each Local Government

LGA	Commercial	Microfinance	Agricultural Bank	Mortgage Bank	Insurance	Total	percentage	Mean Deviation
Ado LGA	31	3	0	1	9	44	41.12	37.31
Efon	1	1	0	0	0	2	1.87	-4.69
Ekiti East	3		0	0	0	3	2.80	-3.69
Ekiti South Wet LGA	5	1	0	0	0	6	5.61	-0.69
Ekiti West LGA	3	1	0	0	0	4	3.74	-2.69
Emure LGA	2	0	0	0	0	2	1.87	-4.69
Gbonyin	4	0	0	0	0	4	3.74	-2.69
IdoOsi	5	1	0	0	0	6	5.61	-0.69
Ijero	4	1	0	0	0	5	4.67	-1.69
Ikere LGA	6	1	0	0	0	7	6.54	0.31
Ikole	3	2	1	0	0	6	5.61	-0.69
Ilejemeje	1	0	0	0	0	1	0.93	-5.69

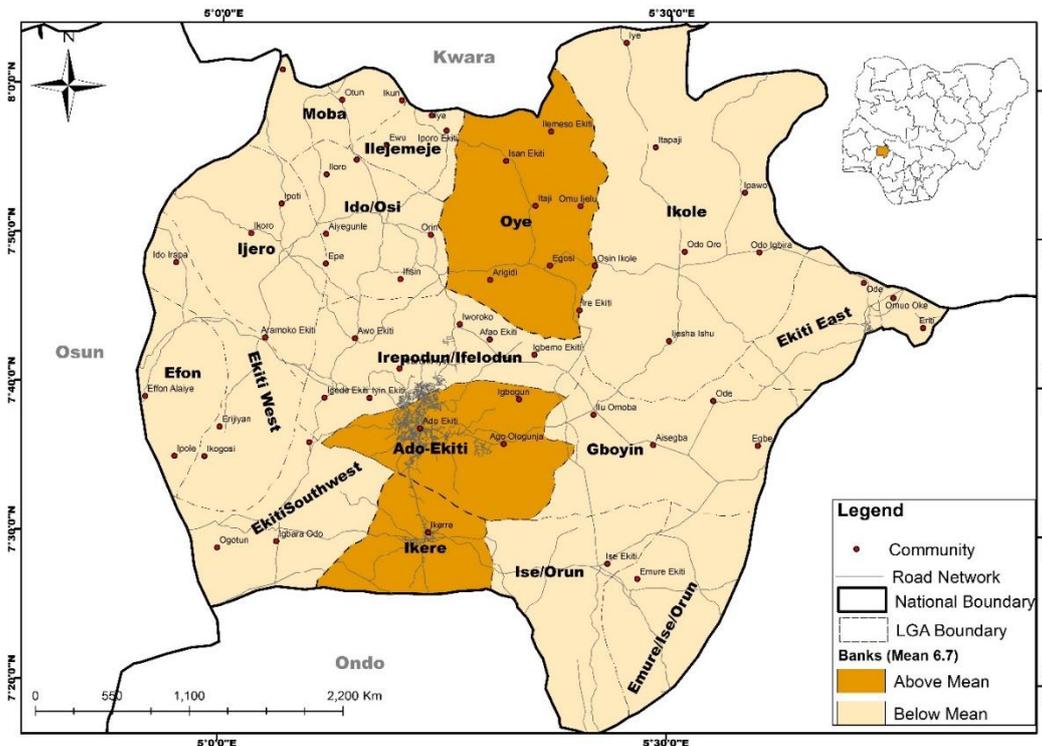|								
Irepodun/Ifelodun	2	1	0	0	0	3	2.80	-3.69
Ise-Orun	2	0	0	0	0	2	1.87	-4.69
Moba	3	1	1	0	0	5	4.67	-1.69
Oye	3	4	0	0	0	7	6.54	0.31
Total	78	17	2	1	9	107	100.00	100.31

Source: field survey 2009

Figure 2: Mean Deviation of Banks

3.1.3 Transportation and communication

Accessibility is a major driver of economic development. Good and motorable roads are very important to enhance housing development in rural area. Provision of good roads also enhances transportation of food, movement of agricultural produce, agro-based industrial raw material and facilitating business. however, inventory shows that there are 600 road in Ekiti state,291 paved road and 309 unpaved road which shows that IkoleLGA andIdoOsi has the highest paved road with 39 and 35 paved road respectively. Meanwhile, an effective communication foster and quicken businesses. there are four major communicative facilities in Ekiti state, this include, the general post office, Courier service Internet facility and the global service communication (GSM). There is a total of 579 communication mast in Ekiti, 39 post office, 5 internet facilities and 7 courier services. virtually all the LGAs has a post office except Ekiti East. Also, there are no internet and courier service except Ado LGA. However, out of the 16 LGAs, 9 has less than 40 communication facilities as shown in figure 3
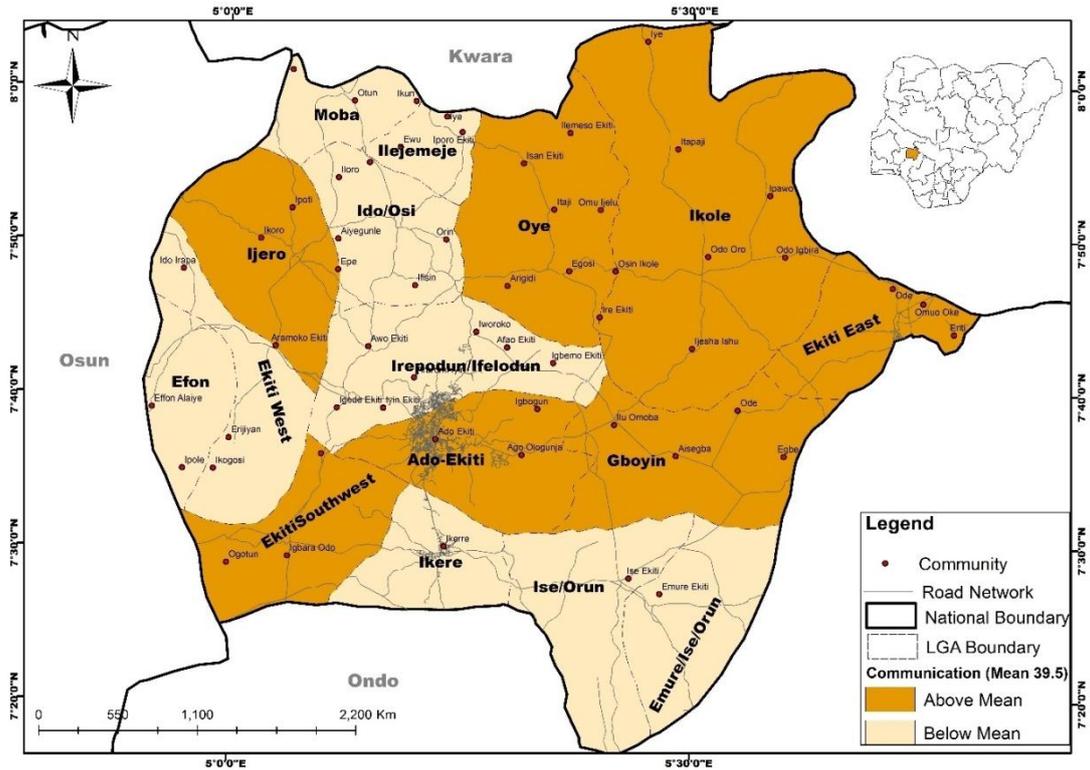
Figure 3: *Mean Deviation in communication*

3.1.3 Health Facilities

Health is said to be wealth. The health status of a rural dweller is a proxy for measuring his/her agility and ability to partake in agriculture. This survey shows that virtually all the local government have this facility. However, Ijero LGA and Ikere LGA did not have a General hospital, hence primary health care was provided (16 and 10 primary health facilities respectively). meanwhile Efon has the lowest healthfacilities with 2 general hospital and 7 primary health centres. As at the time of field survey, majority of these health centres and dispensary were inadequate due to lack of drug, dilapidating structure, qualified personnel and funds.
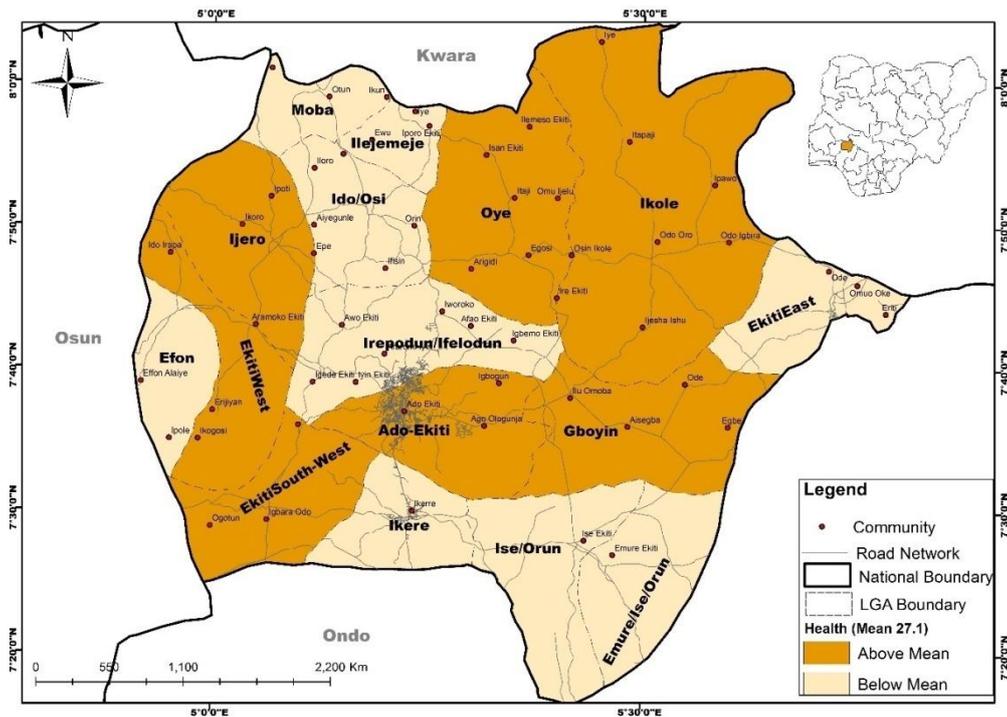

Figure 4: *Mean Deviation in Health facilities*

3.1.4   Public Utility

Water is highly needed by man to support life. The availability of healthy water helps to prevent communicable diseases. Water sources like rivers and dams can also be useful for irrigation purposes during the dry season. This in turn will definitely increase farmers' output which can ultimately reduce the number of youth migrating to urban areas. Likewise, electricity is very important for it has become a necessity not only in urban areas but also in rural areas. People use electricity for different purposes which can be commercial or domestic which facilitate businesses. hence Inventory was done on Electricity supply, Water supply, Fire Service, Police Stations, and Library.

➢ *Electricity supply*

Inventory was done on the number of transformer available and its condition. Survey shows that there are 450 transformers in Ekiti state, in which Ikere has the lowest with 6 transformers, while Ijero have the highest with 61 transformers. however, few of these transformers are in good condition some were not even available while some were not functioning.

➢ *Water Supply*

There are different sources of water supply in the local government, prominent ones include well, borehole, tap and river or stream water. All these sources are used for both domestic and commercial activities. Research observed that all the LGAs were served with either Pipe borne, bore hole and well water supply. however, Efon LGA has only 1 Pipeborne and 2 bore hole water supply which was the lowest in all the LGA. meanwhile, Ikole has the highest water facility, seconded by Ado LGA with 61 and 37 water facilities respectively. Also, there are 58 reservoirs/Dam in Ekiti state. Gbonyin have the highest quantity of these reserviour and IdoOsi and Ise orun have none.

➢ *Fire service, Library, and Petrol station*

There are 7 fire service in ekiti state with its headquarters at Ado LGA, Mobe LGA have the highest of this facility with Ijero, Ikere, Ikole and Ado have 1 each. Meanwhile, Mobe have the higest number of Library (2 libraries) while Ado, Efon, Ekiti East, Ekiti South, Gbonyn and Ijeron have 1 each. Also, there are 175 petrol stations in Ekiti state where 30 percent was in Ado LGA and others were spread across the 15 other LGAs. More also, Ado, Idoosi,Ijero LGA have 8 police station each. meanwhile Oye LGA have 9 police station which is the highest frequency. others were shared among the police station 15 LGAs to make a total of 79 police station facility.
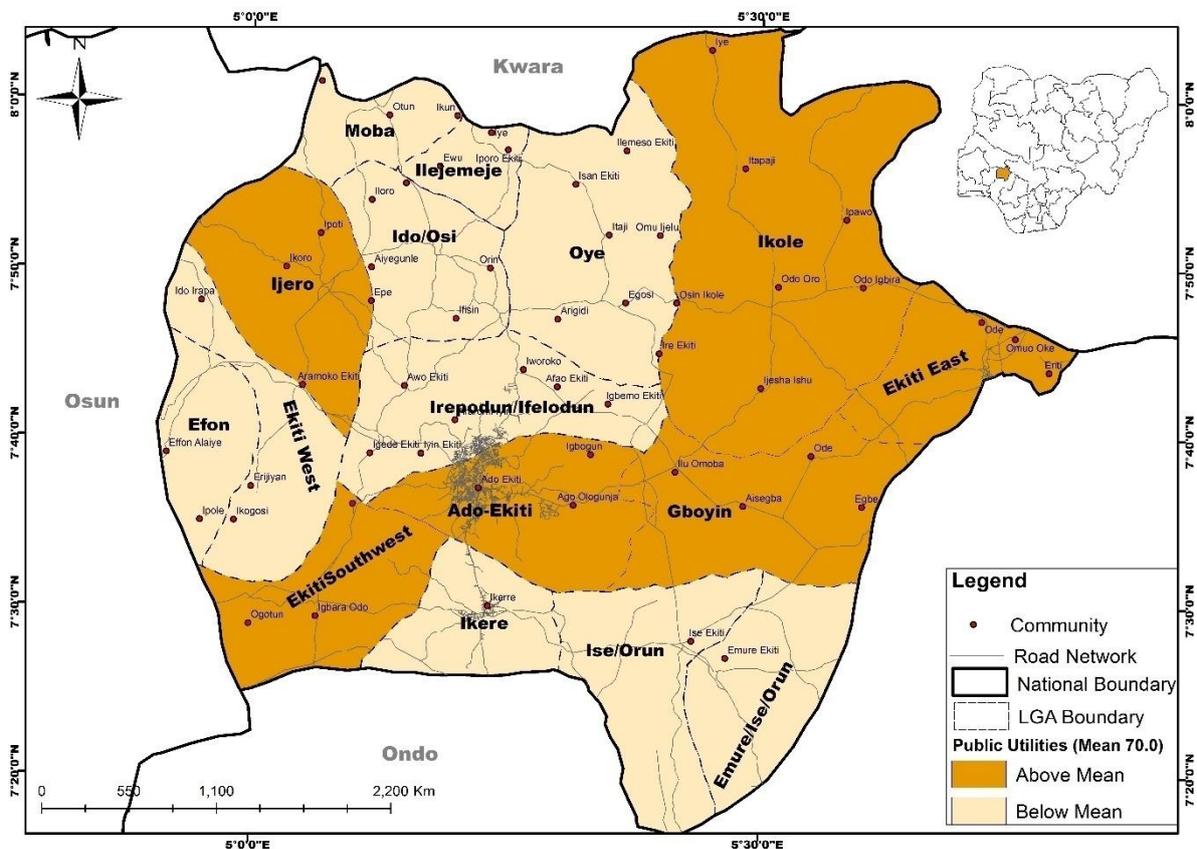

Figure 5: *Mean Deviation in Public Utilities*

3.1.5 Administrative Facility

Definitely all the LGAs has secretariat, however, other government agencies such prisons service, Nigeria security and civil defence, internal revenue service, NLC secretariat etc were also grouped under government organisation. hence, there is a total of 261 government secretariat in Ekiti state, 8 high court, 22 customary court, 412 palaces and 79 police station. of all the LGAs, only 8 has high court and 11 LGAs have customary court. Meanwhile, only 5 LGAs were above 42 administrative facilities, this implies that administrative facilities are not sufficient within the State.
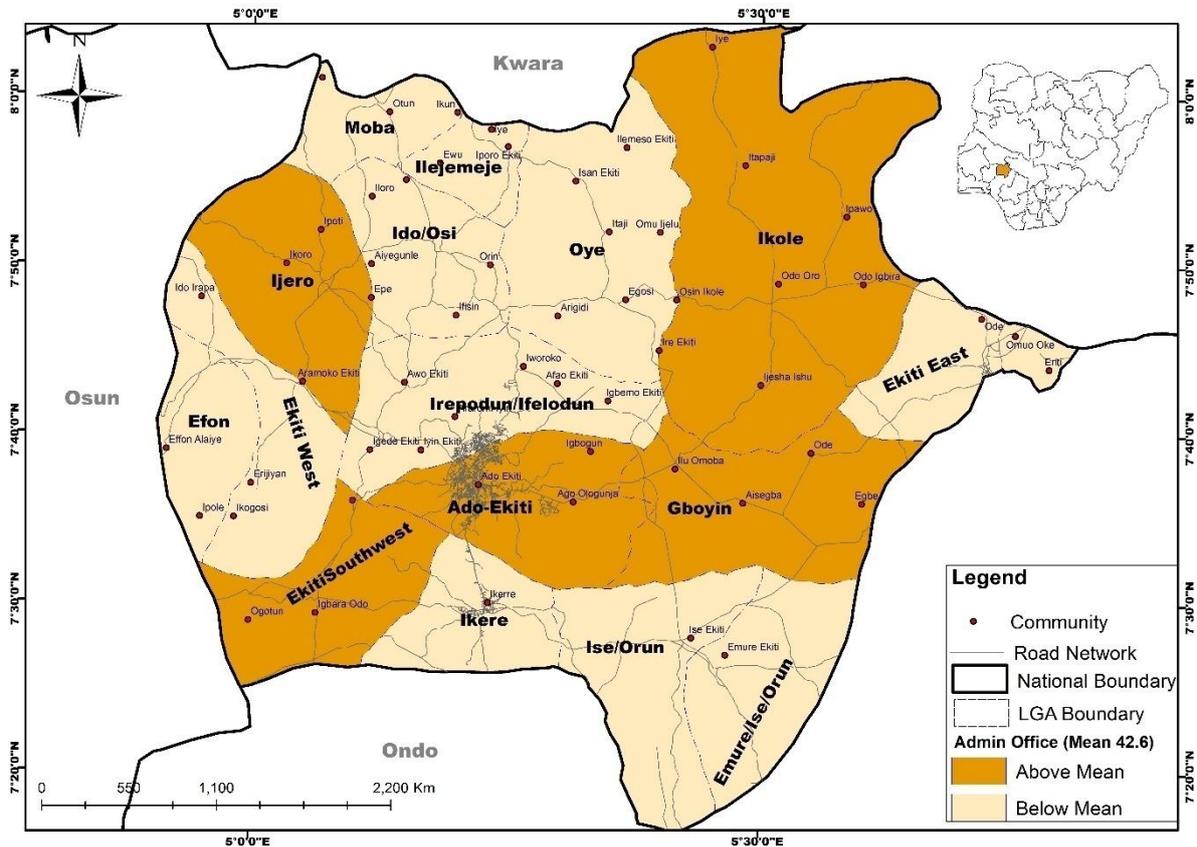
Figure 6: Mean Deviation in Admin Secretariat

3.1.6 Recreation Facilities

Recreational activities are always considered to be ways of refreshing and relaxation, which includes, sport centres, gardens, bars, etc. however, there were only 2 garden facilities, 26 sport centres, 29 community halls and 106 hotel/Guest houses in Ekiti state. meanwhile, these gardens were only found in Ado LGA, also 21 sport centreswere found in Ado and IdoOsi, Ikole has 1 sport centre each. Virtually all the LGA have community/town hall expect Gbonyin, Ilejemeje, Ise-Orun, Moba and Oye. Also, Ekiti west and Oya has 13 hotel/Guest house each, while Ikere and Ekiti southwest has 7 hotel/Guest house each.
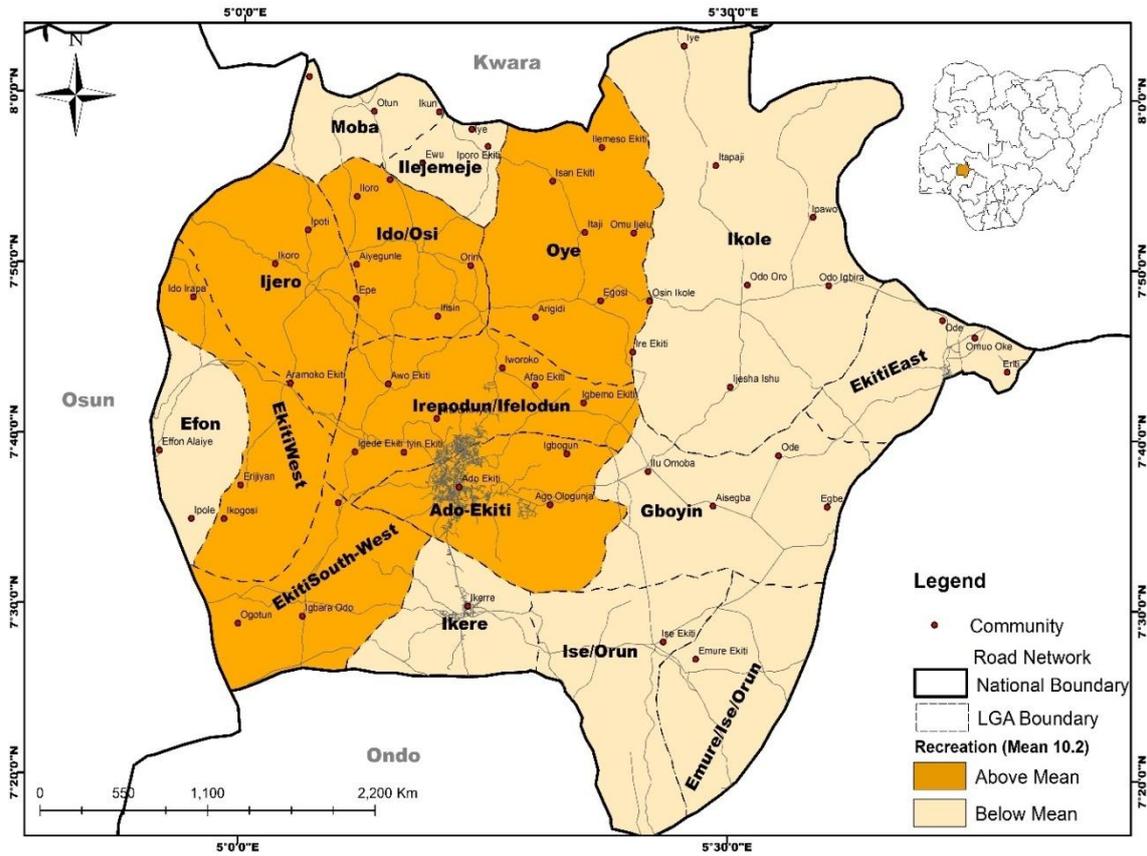
Figure 7: *Mean Deviation in Recreation facilities*

3.2 The Spatial distribution of different infrastructure at each LGA

Population size is an important factor in development, when government provides social amenities; communities with large populations are usually favoured because it is more economical and viable to establish them in populous communities with large demands for goods and services. More importantly, the emergence or establishment of a service in a locality depends on whether the locality can produce the population threshold for the service. This threshold is the minimum population size required to support the existence of a service. This is further confirmed by the result of the analysis conducted using location quotients (LQ) in which LGAs with large populations but small number of infrastructure recorded LQ of lessthan 1.0 are at disadvantaged. The result of the analysis of the distribution of infrastructural facilities showsthat disparity exists among the LGAs. In Appendix II, it was observed that LGAs like Efon, Ikere, Irepodun and Moba are lagging in education infrastructure, while other LGAs has these facilities more than expected. This is because of the low and high proportion of population within different LGAs. More also, health facility which is paramount to all the age groups is also less expected within some LGAs such as Efonand Emure LGAs. this is as a result of the ratio of health facilities to population which is relatively low. However, all the LGAs were connected (Transportation) expect Ado, Ikere and Moba LGAs. Meanwhile Moba LGAs do not have a recreation facility. Furthermore, virtually all the LGAs has public utility but Ikere LGA is less privileged whilecommercial facility such as bank is less expected in all the LGAs expect Ado LGA.However, after considering the areal of Ekiti, it was observed that all the facilities were clustered with a value less than 1 as shown in Appendix III

IV. CONCLUSION

Infrastructure distribution is central to community development. Improved infrastructure not only expands opportunities for growth but also help ensure that such growth is more diffused and equitable. Many developing countries, especially in Nigeria, still have woefully inadequate levels of rural infrastructure, and this is a major constraint to their socio-economic development. This study assessed the spatial distribution of infrastructural facilities. The result of the analysis conducted using Location Quotient (LQ) and Average NearestNeighbour shows that there is uneven distribution and a clusteredconcentrationof infrastructure within the study area which was also reflected in similar studies by Awosusi & Jegede, 2013 and Odeyemi, 2014.Findings also shows that most of the LGAs particularly those that are highly populated have inadequate facilities. Finally, this study concludes by suggesting that future researches should examine in more detail the

role of rural infrastructure on social development of rural areas by laying emphasis on the quality of the infrastructure rather than quantity, so as to be able to figure out the true dimension of the development.

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Appendix I: Inventory on Infrastructural Facilities in Ekiti State

Category	Facilities/LGAs	Ado	Efon	Ekiti East	Ekiti South west	Ekiti West	Emure	Gbonyin	IdoOsi	Ijero	Ikere	Ikole	Ileje-meje	Irep-odun	Ise Orun	Moba	Oye
Education	Nomadic Schools	1	0	0	0	1	0	0	0		0	1	0	0	0	1	1
	Primary School	159	24	61	76	71	36	57	58	88	65	84	24	53	51	41	72
	Secondary School	49	9	23	25	21	10	31	30	27	19	38	14	20	21	15	22
	Tertiary Institution	4	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0
	Technical Education	1	0	0	1	0	0	1	2	1	0	1	0	0	0	1	0
	Theology/Colleges and Others	2	1	0	1	0	1		3	1	0	0	0	1	0	0	0
Administrative	Local government Secretaries	39	2	5	8	3	1	6	6	8	11	17	2	8	4	5	6
	High Court	1	1	1	1	0	0	0	1	0	1	1	0	0	1		0
	Customary Court/Chief Magistrate	0	1	1	3	2	0	1	2	5	0		1	1	0	1	4
	Palace (Traditional Rulers)	27	12	12	52	24	23	30	15	62	6	46	24	18	30	14	17
Commercial	Commercial Bank	31	1	3	5	3	2	4	5	4	6	3	1	2	2	3	3
	Microfinance Bank	3	1		1	1	0	0	1	1	1	2	0	1	0	1	4
	Agricultural Bank	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
	Mortgage Bank	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Insurance	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Utility	Electricity (Transformer)	27	12	51	52	24	23	30	15	61	6	46	24	18	30	14	17
	Water Supply (Pipe Borne, Borehole and Well)	37	1	22	10	14	4	21	14	28	9	61	20	28	14	31	28
	Water(River/Streams/Ponds)	15	10	46	48	15	15	25	0	42	2	22	2	4	15	12	17
	Water (Rainwater Harvest)	4	1	51	0	2	6	0	1	34	0	13	17	4	7	14	15
	Petrol Stations	52	5	14	4	11	5	11	13	7	12	7	1	10	7	8	8
	Libraries	1	1	1	1	0	0	1	0	1	0	0		0	0	2	0
	Fire Service	1	0	0	0	0	0	0	0	1	1	1		0	0	3	0
	Police station	8	3	4	4	6	1	6	8	8	3	7	3	4	1	4	9
	Reservoirs/Dams	5	3	4	4	5	5	7	0	3	0	8	3	5	0	4	2
Transportation	Paved Road	12	11	14	12	13	10	28	32	25	7	39	11	29	10	12	26
	Unpaved Road	17	5	50	52	16	14	20	3	29	4	44	12	7	20	7	9
Health	General Hospital	4	2	1	2	2	1	2	1	0	0	1	1	1	1	1	3
	Primary Health care centre	14	7	12	26	18	8	14	12	16	10	15	8	10	12	9	16
	Comprehensive Health Centre	3	0	2	0	5	0	5	7	6	1	3	4	3	1	4	2
	Private Health care centre	27		3	2	3	0	1		4	3	3	0	1	1	2	2
	Maternity Home	4	0	0	2	0	1	0	1	0	0	0	0	0	1	2	1
	Specialist Clinic	6	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Recreation	Gardens	2	0	0	0	0	0	0	0	0	0						
	Sport centre/Park/Game reserve	21	0	0	0	1	0	0	1	2	0	1	0	0	0	0	0
	Community hall	4	1	2	4	5	1	0	3	2	1	2		4	0	0	0
	Hotel/Guest house	9	5	3	7	13	4	5	12	9	7	5	1	9	4		13
Communication	Communication Mast	57	14	60	63	27	27	39	21	64	8	54	24	32	31	14	36
	General Post Office/Agency	1	1		3	4	1	5	4	3	16	3	6	3	3	1	5
	Internet Facility	2	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
	Courier Service	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: Field survey 2009

Appendix II: Spatial distribution of Infrastructural facilities (Location Quotient)

LGAs	Population (2006)	Education	LQ	Health	LQ	Communication	LQ	Transportation	LQ	Administration	LQ	Recreation	LQ	Public Utility	LQ	Banks	LQ
Ado	308621	216	1.17	58	1.29	67	0.82	29	0.37	105	1.19	36	1.72	131	0.90	44	3.18
Efon	86941	34	0.65	9	0.71	15	0.65	16	0.73	19	0.76	6	1.02	27	0.66	2	0.51
Ekiti East	137955	85	1.03	18	0.90	60	1.65	64	1.84	23	0.58	5	0.53	96	1.48	3	0.48
Ekiti Southwest	165277	104	1.05	32	1.33	66	1.51	64	1.54	68	1.44	11	0.98	75	0.97	6	0.81
Ekiti West	179892	93	0.86	28	1.07	31	0.65	29	0.64	35	0.68	18	1.47	60	0.71	4	0.50
Emure LGA	93884	47	0.84	10	0.73	28	1.13	24	1.02	25	0.93	5	0.78	38	0.86	2	0.47
Gbonyin	148193	89	1.00	22	1.02	44	1.12	48	1.29	43	1.01	5	0.50	76	1.09	4	0.60
IdoOsi	159114	96	1.01	21	0.91	25	0.59	35	0.87	32	0.70	16	1.48	50	0.67	6	0.84
Ijero	221405	117	0.88	26	0.81	67	1.15	54	0.97	83	1.31	13	0.86	109	1.05	5	0.50
Ikere LGA	147355	84	0.95	14	0.65	17	0.44	11	0.30	21	0.50	8	0.80	31	0.45	7	1.06
Ikole	168436	124	1.23	23	0.94	57	1.28	83	1.96	71	1.47	8	0.70	130	1.64	6	0.79
Ilejemeje	43530	38	1.46	13	2.05	25	2.17	23	2.10	30	2.41	1	0.34	51	2.49	1	0.51
Irepodun/Ifelodun	129149	74	0.96	15	0.80	38	1.11	36	1.11	31	0.84	13	1.48	65	1.07	3	0.52
Ise-Orun	113754	72	1.06	16	0.97	34	1.13	30	1.05	36	1.11	4	0.52	52	0.97	2	0.39
Moba	146496	58	0.66	18	0.84	15	0.39	19	0.52	24	0.57	0	0.00	66	0.96	5	0.76
Oye	134210	95	1.18	24	1.23	41	1.16	35	1.04	36	0.94	13	1.43	64	1.01	7	1.16
Total(p)	2384212	1426		347		630		600		682		162		1121		107	

Source: Authors Analysis 2018

Appendix III: Spatial distribution of Infrastructural facilities (Average Neighbour Analysis)

Facilities	Total Frequency	NNR	Z-score	P-value
Education	1426	0.516377	-35.2429	0
Health	347	0.678071	-11.6529	0
Communication	630	0.371849	-17.0793	0
Administration	682	0.35364	-16.0749	0
Recreation	162	0.399702	-16.9561	0
Public Utility	11211	0.399251	-18.8495	0
Banks	107	0.366999	-12.7008	0