ANALYSIS OF SOCIOECONOMIC DEVELOPMENT DIFFERENTIALS IN KOGI STATE, NIGERIA

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DECLARATION

I declare that this thesis entitled "**Analysis of Socioeconomic Development Differentials in Kogi State, Nigeria** is done by me - Grace Foluke BALOGUN in the Department of Geography and Environmental Management, Ahmadu Bello University, Zaria under the supervision of Prof. J. O. Adefila, Dr. R.O. Yusuf and Prof. I. J. Musa. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this Thesis was previously presented as a degree or diploma at this or any other institution.

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CERTIFICATION

This thesis entitled **"Analysis of Socioeconomic Development Differentials in Kogi State, Nigeria"**is produced by Grace Foluke BALOGUN and meets the regulations governing the award of Doctor of Philosophy (PhD) degree of the Ahmadu Bello University Zaria, Nigeria and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This work is dedicated to my lovely children Precious Eniola Balogun, Praise Oluwatobiloba Balogun and Peace Okikiola Balogun and to the hopeless and helpless individuals who keep on longing for a better future.

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ABSTRACT

There are environmental contrasts in terms of variations in the distribution of resources among regions. The disparities are glaring among the regions that make up Nigeria and this fact is entrenched in the Second National Development Plan (1970 – 1974). It recognized the spatial inequalities in the country and efforts are being made to reduce the gap among the geographical units. The country has not satisfactorily addressed the issue of how development can be evenly or spatially achieved. The major goal of this study is to assess the differentials in socioeconomic infrastructures development in Kogi State. Questionnaire survey and documented materials constituted major sources of data. All the twenty-one Local Government Areas of the state formed the study area. Some 784 respondents were randomly selected in the state for the administration of the questionnaire. The descriptive statistics method was employed involving the calculation of percentages, mean, frequency counts and averages to summarize the data into tabular forms. Also, inferential statistics were employed namely Location Quotient (LQ), Standardized Score (Z-score) and Factor Analysis techniques. The location quotient result is categorized into upper, middle and bottom thirds based on the performance of each LGA in the distribution of the socioeconomic facilities. The upper group includes Ogori (1.82), Idah (1.78)and Bassa (1.63), while the middle group includes Ibaji (1.18), Olamaboro (1.16) and Dekina (1.12) and the bottom group include Yagba-East (0.86), Kabba-Bunu (0.82) and Ofu (0.80) among others. For the purpose of comparism, the Standardized Scores (Z-Scores) was employed using the five dimensions and the associated 23 variables. The Z-score result showed varying degrees of the indicators of socioeconomic development infrastructures among the LGAs, such that seven areas were found to be advantaged namely Ogori, Idah, Bassa and Omala in the upper category, while the disadvantaged areas include Yagba-East, Kabba-Bunu, Ofu and Ankpa. The Factor Analysis result showed the strength of each factor responsible for the pattern of socioeconomic distribution in the study area. The study revealed a polarized pattern of socioeconomic development in Kogi State. On the basis of the findings, the study recommends that there should be a discriminatory investment in favour of the less privileged areas in subsequent resource allocations by government, community leaders and individual philanthropists. Developing marginalized areas can abate misunderstanding and discontentment that may arise when backward communities feel they are uncared for.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Economic development is the process by which a nation improves the economic, political and social well-being of its people (Schumpeter and Backhaus, 2003). In the developing economies such as Nigeria spatial inequalities are noticeable between rural areas with traditional agriculture, low income per capita, and poor living conditions on the one hand and their urban counterparts with modern commercial activities, industrial revolution, high per capita income and better condition of living on the other hand (Akpan, 2000). The issue of regional inequalities is very glaring in developing countries, but the problem of disparity in development among nations and among the different regions of any nation is not only restricted to developing countries (Umoren, 2013). This phenomenon has given rise to polarized pattern of development. On the one hand, the concentration of urban population in only a few large metropolitan areas has reinforced and maintained dualistic economic growth and has reinstated disparities in regional development. On the other hand, the population is distributed so widely that an articulated settlement system capable of supporting the variety of services and facilities needed for rural development is yet to emerge (NISER, 2001).

Sulyman (2009) remarked that the highly centralized spatial structure of the Nigerian economy with its associated marked variations in regional wealth and in standards of living is deeply rooted in history of colonization. The author further stated that an institutional basis of the British political economy in the country was a few trading companies that handled the collection and dispatch of all goods produced for export and the importation and distribution of manufactured goods. This brought about inter-

regional gaps in development. Another component of the British economic policy that influenced the spatial development of the country was the introduction of new agricultural commodities such as cocoa and the valorization of existing ones such as groundnuts, cotton, palm-produce and rubber. Pursuant to these policies priority was accorded the construction of the transport network. A number of regional economies thus quickly emerged each based on its comparative advantages for the production of cocoa, oil-palms, and groundnuts. An important consequence of these for economic development was that the impulses of development propelled along the transportation system initiated a dynamic situation in which labour moved to areas of new export crop production and to the towns that served them. Since independence this trend in migration has profound influence on the pattern of national and regional development investments and expenditures such that state capitals and local government headquarters become centres of socioeconomic development compared to adjoining hinterlands (Ighodaro, 2009).

In the sixties a reduction in inequality has been regarded as a major component of the development process and a step towards raising living standards (Ita, Bisong, Eni and Iwara 2012). Adefila, (2012b) remarked that socioeconomic activities are spatially spread unevenly and that historical factors, political, cultural, natural endowment to economic processes among others are the cause. The researcher further stated that with the understanding of processes at work, attempts have always been made towards the identification of spatial inequalities among the regions and to produce a body of theory for their areal explanation.

The first explicit awareness of spatial disparity was shown in Nigeria's second National Development Plan (1970-1974). This plan clearly spelt out five principal objectives of establishing Nigeria as: a united, strong and self-reliant nation; a great and dynamic economy; a just and egalitarian society; a land of bright and full opportunities for all citizens; and a free and democratic society. The objectives stated in this plan were to represent the long-term goals of the country's development efforts in the bid to reduce 'inequalities in interpersonal incomes, and promoting balanced development among the various communities in the different geographical areas in the country' (FGN, 1970).

The Third National Development Plan (1975-1980) was the first National Development Plan with serious concern for rural infrastructure development. The plan recognized that the extreme rural-urban disparities in the provision of social amenities and living conditions are responsible for rural-urban migration which is inimical to economic development (FGN, 1975). The plan emphasized the need to reduce regional disparities in order to foster national unity through the adoption of Integrated Rural Development (IRD). IRD has been defined as a consciously formulated, systematic, multi-sectional programme to attain the integration of the rural people in the mainstream of economic groups in a country. The objective was to ensure the provision of rural infrastructure and that through this, rural productivity quality of life would be increased (Ebehikhalu, 2004).

The fourth national plan (Nigeria, 1980-85) recognized the widening disparities in the level of development particularly between the rural and urban areas in the country and evolved some strategies to ameliorate the existing gap through the creation of more

states and local governments. The rationale behind this policy is to allay the fear of the minority group by bringing government and development close to the people at the grass root. This brought about the decentralization of decision-making process through the creation of States and local government which tend to counterbalance the centre-down approach. Thus, the creation of more states and local government areas brought in a more rational spatial arrangement (Ajayi, 2007).

The revenue allocation formula had progressively de-emphasized the principle of derivation and placed more attention on the principles of equality, needs and national unity. This revenue sharing formula is to be adopted by government at all level, but it was not strictly followed. This is evident from Ogoni uprising while agitating for resource control over their land now in Rivers State. Petroleum has been the life-wire of Nigeria's economy and since its discovery in 1958 some estimated 100 billion dollars' worth of oil and gas has been carted away from Ogoni land. The exploitation of oil and gas led to environmental degradation in terms of pollution, deforestation and deprivation of the oil producing communities. The continual agitation, neglect of the people benefit from economic growth and development led to the formation of the Movement for the survival of the Ogoni people (MOSOP), a non-violent action group for social and ecological justice headed by the late Ken Saro-Wiwa (MOSOP 2014). It would be recalled that it was on this issue of resource control that Ogoni leader was killed by the military junta in 1994.

Yunusa, (1991) observed that the pressing issue of socio-economic development has being the challenge of the widening gap between the rich and the poor worldwide. This phenomenon is manifested between individuals, between rural-urban locations,

between regions in a country, and between developed and developing countries at a global level. Recardo; (2004), Sandra; (2004) and Enrique (2004) had remarked that the world's population can be divided into two groups namely, the rich and the poor and that the gap between them has been widening and in many cases has led to worsening conditions for the poor segments whose majority are rural based. Adefila (2008) also remarked that Nigerian society has been polarized into a few urban, commercialized, industrialized, rich on the one hand and extensive rural, agricultural and poor on the other. This pattern of lopsidedness in development is glaring within the space economy in the developing countries.

The polarization of Nigerian society into a larger rural sector and a smaller urban component is hardly arguable. Equally familiar is the heavily skewed nature of industrial, commercial, infrastructural and administrative development in favour of the few urban centres at the expense of their rural counterparts (Ita *et al*, 2012). In Kogi State, there seems to be a discernible pattern of inequalities in socioeconomic indicators across Local Government Areas of the State. Some Local Government Areas enjoy huge government presence, while others suffer complete neglect or fairly enjoy government presence. For example on the issue of transportation, a great percentage of the roads in Lokoja, the capital city and environs are tarred while a greater percentage of the roads in other LGAs are not tarred. Similarly, while road density and inter-connectivity are high in Lokoja, they are very low in each of the other local government area of the state (Alabi and Ocholi, 2010). In addition, the establishment and distribution of industries in the state leaves much to be desired.

A cursory look at the industrial map of kogi state shows that, the western senatorial district has very few industries with majority of the industries sited in Lokoja town and Kogi East Senatorial district. This is the same across with other development indicators such as education, hospitals, electricity and others. The situation of things in kogi state indicates inequality in the distribution of socioeconomic facilities. Oyekanmi, Ayansina, Muyiwa and Jubril (2011) in their study reveal inequality in the distribution of social infrastructure in rural areas of the study area which needs to be addressed promptly to allow for even development. It is on this background that the study analysis the socioeconomic development differentials in Kogi State.

1.2 STATEMENT OF THE RESEARCH PROBLEM

It is obvious that there are variations in the level of economic development among regions and among countries of the world. It could be as a result of uneven distribution of physical, human and natural resources. Abundant evidence exists in the literature on inequalities in the distribution of socioeconomic facilities in Nigeria. While some regions have some resources in abundance, other regions are lacking in the resources. For instance, some areas have education facilities close to their area and as such pay less to access the facility. It is also true for other facilities like health care, good drinking water, electricity, accessible roads, communication network and others. The areas that are lacking in having these facilities are affected adversely and as a result pay heavily to access the facilities.

Kogi State from observation is dominated by undulating landscape, broken by hills which formed resistant rocks which has profound influence on the pattern of settlement in the area. The eastern region has a fairly undulating terrain which gave it higher

development as against the western region that is characterized by resistant rocks. Land for development is relatively scarce in the western part of the state. The growth of towns is therefore rapidly taking place where the land is relatively flat (Ocheja, 2010). Socioeconomic facilities seem to be concentrated in particular areas of the state, giving rise to a lopsided pattern of development. It is therefore logical to propose that the availability and equitable distribution of infrastructures will accelerate or discourage socioeconomic development of Kogi State.

For instance Adefila and Bulus (2014) examined Spatial Inequalities in Infrastructural Development in Plateau State. Both primary and secondary data were used for the study; the study revealed that some areas in Plateau State have more than average share thus making infrastructural facilities to be localized. It was discovered that, the type of lopsided spatial pattern of development tend to aggravate the problem of regional imbalance. It was therefore recommended that the federal government should address this regional imbalance with more seriousness.

Umoren (2013) examined the socioeconomic development inequalities among Geographic units in Akwa Ibom State, Nigeria. Survey research method which includes oral interview, questionnaire administration was adopted. Findings revealed among others that there exist variation and patterns in the socioeconomic development in Akwa-Ibom State. The study recommends the increase of the number of socioeconomic indicators in the disadvantaged areas.

Ita, Bisong and Iwara (2012) investigated Spatial inequalities among geographic units in cross river state, Nigeria. The study principally relied on secondary data (social and

economic indicators) sourced from record of available socioeconomic facilities in each Local Government Areas of the state. Data obtained were subjected several statistical analysis such as mean, standard score, factor analysis and analysis of variance. The result of the analysis of variance showed that there was a significant variation in the levels of socioeconomic development among the Local Government Areas. The findings of the study revealed that inter-regional gaps in development and welfare were reflections of deficiencies in the provision of necessary social services and physical infrastructure. The study therefore recommends increase in the relative share of social services and improves the availability of physical infrastructures in the deprived/marginalized areas.

Adefila (2012b) examined the regional inequalities in socioeconomic development in Nassarawa State of Nigeria. The study employed location quotient (LQ) to analyze the data which revealed that the major urban areas in the State did not rank among the first category of developed areas. The analysis of the indicators took a four dimensional approach namely, economic, health, infrastructure and social. The result revealed that socioeconomic facilities in those areas are inadequate for the teeming population. On the basis of findings, the author recommends that communal self-help projects should be encouraged in each area by embarking on building of schools, colleges and health centres.

Oyekanmi, Ayansina, Muyiwa and Jubril (2011) conducted a study on the geo-political patterns of health care facilities (HCF) in Kogi State, Nigeria. The total number of health care facilities and their ownership in each stratum were determined and analyzed. The result showed that there exist inequalities in the distribution of health

care facilities among the various senatorial districts in the state. There is a noticeable spatial variation in the distribution of health care facilities among the various senatorial districts. It was observed that Kogi Central is the most disadvantaged senatorial district. One senatorial district ranked far ahead of the two others in the distribution of all categories of health care facilities i.e (primary and Secondary). Kogi east senatorial district ranked far ahead of the west and the central districts in the distribution of health care facilities. The senatorial districts recorded 67.4% and 54.1% of Primary Health Care (PHC) and Secondary Health Care (SHC) facilities respectively. The result also pointed to the fact that in respect to facility-population ratio, Kogi east senatorial district fares better than the two others. Whereas the facility-population ratios in Kogi east are 1:1689 and 1:23736 respectively for PHC and SHC facilities; the ratios for Kogi central are 1:6850 and 1:41859 respectively which is an extremely wide margin.

Akpan (2000) examined spatial inequality in development in Akwa-Ibom State Nigeria. The study adopted analysis of variance (ANOVA) statistical technique and came up with the finding that significant differences exist in levels of development among the administrative units in the State. Akpan categorized these differences into three as developed, fairly developed and the third being disadvantaged.

Having gone through the accessible past studies, it becomes obvious that much is yet to be done particularly in the areas of the processes that gave rise to the lopsided polarized pattern of socioeconomic development in Kogi state. The work of Oyekanmi, *et al* (2011) in Kogi State is limited so much that only the spatial inequalities in health care facilities were focused on. A review of the above studies revealed that not much has been done in terms of formal analysis of factors that might have given rise to

inequalities in the State. The emphases of the various scholars have been on different aspects of infrastructure, rural development and economic development in the state. It is now glaring that the tempo of research in this regard is still low or absent as far as Kogi State is concerned. The only available study was Balogun (1989) who examined the regional pattern of development in Kwara State before the creation of Kogi State out of Kwara and Benue in 1991. The author used non-hierarchical grouping to observe the existence of dualism in the space economy and identified its existence in the space economy of the study area, Kwara State.

The present study encompasses a wider coverage of socioeconomic surrogates to measure and analyze development differentials in the study area. The study therefore addressed the following research questions:-

1 What is the pattern of socioeconomic development in the study area?

2 What is the extent of spatial inequalities in socioeconomic development in the study area?

3 What is the extent of variation in socioeconomic development among the different areas in the study area?

4 What are the factors responsible for the pattern of socioeconomic development?

5 What are the challenges facing socioeconomic development in the study area?

1.3 AIM AND OBJECTIVES.

The aim of this study is to examine the pattern of spatial inequalities of socioeconomic development in Kogi State, Nigeria. However, the specific objectives are to:

i. analyze the spatial pattern of socioeconomic development in the study area.

ii. analyze the extent of spatial inequalities in socioeconomic development in Kogi State.

iii. make a comparative analysis of socioeconomic development among theLocal Government Areas.

iv. examine the factors responsible for the spatial pattern of development in the study area.

v. examine the challenges facing the development of socioeconomic activities.

1.4 RESEARCH HYPOTHESIS

The null hypotheses for the study were:

H0: There is no significant difference in the distribution of socioeconomic facilities in the study area.

1.5 SCOPE OF THE STUDY

This study is concerned with the analysis of socioeconomic development differentials in Kogi State, Nigeria. The local government areas constitute the unit of observation. It covers all the twenty one local government areas in the study area. This study covers areas such as transport and communication, commerce and trade, education, health care, cooperative societies and industrial infrastructures. The indicators are carefully selected for the study because they are observed to play major influence on the socio-economic development in the study area. The temporal frame of the study is confined to 1992- 2016 when data could be readily available for the study. The researcher is rightly informed of chosen the study area because since the geo-political re-structuring of Nigeria and the emergence of Kogi State in 1991 little efforts have been made to examine the changes in the pattern of economic development.

1.6 SIGNIFICANCE OF THE STUDY

There is a growing concern for correcting the spatial inequalities in economic development usually premised on the notion of disequilibrium in the spread of benefits from growth. Growth does not appear everywhere at the same time, it manifests itself in points of 'poles' of growth with variable intensities; it spreads by different channels and with variable terminal effects for the economy as a whole. Therefore in order to break the vicious circle of poverty, re-arrange the spatial structure and attain equity in the economic growth and development within the space economy, the developing countries often pursue industrialization as a prerequisite for development but surprisingly, such industries are often urban based (Yunusa, 1991). The expectation is that benefits of growth from the urban centers will trickle down to the rural hinterlands but this has always been an illusion. Having realized the draw-backs of centre-down approach in our planning efforts, attention has been shifted to bottom-up approach which gave political power to the people at the grass root to participate actively in development process. This is an approach that allows people at the community level to choose their leaders through voting and saddled them with the responsibilities of formulating, implementing and executing economic projects that could increase the living standards at the third tier of government in Nigeria (Adefila, 2012a).

In pursuance of policy statement of ameliorating spatial inequalities in Nigeria, successive governments have embarked on schemes and programmes such as creation of more states, local government reforms of 1976 which allows local administrative units some degree of autonomy and creation of additional ones in order to bring government closer to the people at the grass root; development of agricultural sector as a corner stone of rural economy, integrated rural development; river basin development

authority and rural development, community development and social mobilization are among numerous strategies embarked upon by the government but could not address spatial inequalities as expected hence, the widening gap between the rich and poor units continue to persist.

Efforts to redress the imbalance in development in Nigeria are often constrained by powerful socioeconomic and political forces inherent in our society. The powerful forces facilitate concentration of development at some places and lack of development in certain other places. It is within this perspective that one may talk of a growth center as a function of combination of many factors such as available resources, spatial characteristics of the area, government policies on location of development projects, socio-economic and pluralistic of cultural characteristics of the people (Ogbuozobe, 1995).

Toyin and Adeniyi (2006) observed that economic growth and development do not occur equally in the sectors of an economy and regions even though balanced growth is highly desired in all countries. To redress the disparities in the level of development over the territorial space of nations, attempts are often made to harmonize development of richly endowed and less endowed regions through the adoption of specific development policies most of which contain strong industrial development components. It could be seen that the spatial spread of development in Nigeria is not even. Some regions have developed while others are left underdeveloped.This study will further enhance the understanding of spatial pattern of facilities and the factors responsible for the observed patterns, and also, help in the effective distribution of facilities.

CHAPTER TWO

CONCEPTUAL, THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 CONCEPTUAL FRAMEWORK

2.1.1 Concept of Economic Development

Existing literature has so far shown that the concept of development is wide and multi-dimensional, hence has been seen in different perspectives and given different interpretations. When applied to the social sciences, the complex nature of human societies makes the concept a complex one. Various authors such as; Wunsch and Olowu (1990) stressed its economic, social and political dimensions to varying degrees, and many paths to it are posited. Cutting across them however, and subsuming most of the values they posit (economic abundance, social freedom, political capacity) is one human reality. Development requires the production of complex economic, social and political goods, one requiring complex and coordinated behavior by diverse people across large area of time and space. Economists stress its economic aspect, sociologists focus on its social aspects while political scientists emphasize its political aspects (Wunsch and Olowu 1990).

2.1.2 Spatial inequality in Economic Development

Spatial inequality is a dimension of overall inequality, but it has added significance when spatial and regional divisions align with political and ethnic tensions to undermine social and political stability. Also important in the policy debate is a perceived sense that increasing internal spatial inequality is related to greater openness of economies and to globalization in general.

Why do spatial disparities arise in developing countries? The economic geographer's distinction between first and second nature geography is helpful. First nature geography simply says that some regions are favored by virtue of endowments of proximity to rivers, coasts, ports, and borders. Evidently these factors account for some of the success of coastal China relative to the interior, Coastal Lagos in Nigeria or Border States of Mexico relative to the south. Second nature emphasizes the interactions between economic agents, and in particular increasing returns that can be created by dense agglomerations and interactions. Cities tend to have high productivity, and agglomeration forces act to generate virtuous circles of self-reinforcing development (Christiaensen, Demery and Paternostro, 2005). What determines the strength of these forces? How do they depend on aspects of the economic environment such as openness to trade, the stock of labor skills, the quality of infrastructure, and the policy environment? Of course, once their nature is understood, changes in these forces can be adduced as explanations for changing spatial disparities.

For Africa, the evidence on openness is more indirect. Te, Willen and Morrissey (2005) find that in West Africa, foreign owned firms tend to locate in the capital city, pay higher wages and employ more skilled workers, thereby exacerbating inequality vis a vis rural areas. McCormick and Wahba (2003) find that in Egypt, there is a regional bias in the location of firms and jobs created by returnees compared with non-migrants, in favor of the capital city. There are two reasons why policy makers should be concerned about spatial inequality, defined as inequality in economic and social indicators of wellbeing across geographical units within a country. First, inequality between a nation's regions is one component of overall national inequality across individuals (the other component being of course inequality across individuals' within

each geographical unit or region). When spatial inequality goes up then, other things being equal, so does national inequality. Second, inequality between a nation's regions may be of concern in and of itself, especially when the geographical regions align with political, ethnic, language or religion divisions.

The "new economic geography" has emphasized that there are powerful forces of agglomeration that tend to lead to a concentration of economic activity, magnifying natural geographical advantages that a region may enjoy. Thus spatial agglomeration brings the benefits of returns to scale, and hence helps efficiency and growth. At the same time, openness to the outside world, which is well recognized as a long term source of efficiency and growth, can also lead to spatial concentration. The evidence presented in this work and other researches is clear. Spatial inequalities are high and rising. Then, what should be the policy response, bearing in mind the tradeoffs involved?

The theories of inequalities, evidence and causal analysis presented in some literatures suggests a two pronged approach to addressing the problem of rising spatial inequalities while still reaping the gains from agglomeration and international openness. The first component of the strategy is to remove barriers to the decocentration of economic activity. These can be political and institutional obstacles, such as the need for firms to locate near political and administrative centers. It also requires the development of economic and social infrastructure to facilitate deconcentration, and to help interior and poorer regions benefit from integration into the global economy. Such investments can also start growth poles in lagging regions - new centers of activity can develop and reach a scale where they benefit from a

virtuous circle of agglomeration. The second component is to facilitate, or at least not impede, the migration of individuals and households to areas of high and rising wellbeing. This two sided approach stands the best chance of gaining the most from the efficiencies of agglomeration and openness, without running into the potential destabilization of rising spatial inequality. With this, equity in development may be achieved.

Development has at various times been perceived as economic growth, modernization and redistributive justice. In viewing development as economic growth, emphasis was more on increasing economic growth than on distribution of the benefits. Though this perception dominated development thinking for decades, its various limitations necessitated its being abandoned. In perceiving development as modernization, emphasis shifted to "how to inculcate wealth-oriented behavior and value in individuals. This, in a sense, represents a shift from commodity to a human approach. Investment in education, or more broadly, in human resources, came to be seen as a major and critical basis for social change (Hafiz, Muhammed, Ibrahim, Watirahyel and Maiwada, 2016).

Recent thoughts place emphasis on human development as something distinct and different from economic growth. In establishing priorities and strategies, this distinction can be useful. There is abundant evidence to show that high rates of economic growth do not necessarily lead to rapid improvements in living standards for poorer sections of the population and that greater improvement in their living standards can be achieved by strategies that do not focus exclusively on growth. This distinction focuses on development priorities and the strategies, not on the essential nature of the

development process itself (Jacobs, Macfarlane and Asokan, 1997). In this approach, development is seen not simple as raising per capita income but more importantly, as reducing poverty level among the masses or, as it was picturesquely put, "satisfying their basic needs. Mabogunje (1980) emphasized that this development strategy paid attention to disadvantaged target groups such as small peasant farmers, urban under-employed and urban unemployed. This perception of development was upheld by the United Nations Development Programme (UNDP), and is used in computing their table of human Development report since 1990. Their report of 1990 is of the opinion that human development involves improving people's chances of leading long healthy lives; providing access to education, and making it possible for them to have a decent standard of living (UNDP, 1996).

Various definitions point to the importance of human development in development goals, that is perhaps why Ogunsanya (2002) saw development as a welfare improvement, a better state of attainment goals with respect to who gets what, and where. This state is characterized by ease of access to income earning opportunities and modern social, economic and cultural facilities.One of the best attempts to-date at defining a concept of development is that by Goulet who distinguishes three basic components or core values, labeled as life-sustenance, self-esteem and freedom (Todaro, 2000). Using Goulet's concept (1971) cited in Todaro (2000) of development, therefore, it can be said that development has occurred when there has been an improvement in basic needs, when economic progress has contributed to a greater sense of self-esteem for the country and individual within it, and when material advancement has expanded the range of choice for individuals. The fact that many of these ingredients of development are not measurable does not detract from their importance

the condition of being developed is as much a state of mind as a physical condition measurable by economic indices (Todaro 2000).

Jacobs *et al* (1997), after taking cognizance of existing concepts of development, conclude that development is a function of society's capacity to organize human energies and productive resource to respond to opportunities and challenges. They observed that despite many decades of development experience, fundamental questions about development remain unanswered. For instance, the world still lacks a comprehensive theoretical framework that adequately explains such phenomenon as the very high rates of development exhibited by East Asian countries for many years, the failure of Malthusian projections. The growing contribution of non-material resources not subject to depletion, the apparent failure of market policies in the transition of Eastern Europe, and conflicting predictions about the future of work based on the contrary recent experiences of North America and Western Europe. They proposed a theory of social development and defined development as--an upward directional movement of society from lesser to greater level of energy, efficiency, quality, productivity, complexity, comprehension, creativity, enjoyment and accomplishment.

Jacobs *etal* also emphasized that development is a process and not a programme. Development is not the result of a set of policies or programmes. It is the result of a process by which society moves from lesser to greater levels of energy, quality, productivity, complexity, comprehension, creativity, enjoyment and accomplishment. The center-piece of the concept of development consists of improved living conditions for the people in a defined geo-political area or economy (Uga and Aminu, 2000). According to the World Bank (1991), economic development consists of a sustainable

increase in living standards that encompass material consumption, health care, and environmental production. The improvement is a derivative of supplying increasingly diverse economic goods to its population.

Since the primary focus of this thesis is to analyze the spatial inequality in socioeconomic developmentdifferentials, emphasis is more on development theories that exhibit spatial pattern. Theories like, economic base, growth pole, circular cumulative causation theory, trickle down model and centre periphery. From the foregoing definitions and explanations, it is clear that development is a social good, which involves different processes of change in structures, entities, groups, units and agencies. Hence, real development involves structural transformation of the economy, society, poverty and culture of the people, permitting self-actualization of human potentials. Development is therefore man-centered, which implies that the enhancement of the quality of life of man (in all its ramifications) connotes development (Onwumerobi, 1994).

Development is not evenly distributed; it takes place over time and space, and therefore should have to do with equity considerations (Ogunsanya, 2002). Therefore, the geography of the spatial aspect of development is basically concerned with the spatial diffusion of innovations - the spread of new ideas, the adoption of new techniques and the establishment of new forms of production, all of which involve changes in human activity (Uga and Aminu, 2000). Spatial development is therefore a process concerned with the locational aspects of development and involves the recognition of spatial inequalities in socio-economic welfare, the process at work and the involving strategies for modifying, changing or even reinforcing the observe pattern for purposes of more

equitable spread of welfare to the majority of the inhabitants of the region.(Olomola, 2003).

Development comes about through changes induced, framed and generated by deliberate policies and through development agents. The result is that old forms and ways of doing things are replaced as a result of contacts among societies and social groups through various channels. For development to take place, a society must be open to external influences and internal policy intervention and direction (Hanson and Gordo, 2007). This means that the central and regional authorities, the political system, the development policies and the development agents have great roles to play in the development process.

Many studies at regional and global levels have been carried out on the different aspects of development (Onwumerobi, 1994, Ogunsanya, 2002, and Ita *et al*, 2012). As a result of these studies, many theories have been formulated with respect to the scope and approaches to development. On the developing countries, a lot of broad conceptual schemes have been formulated but they are originated and developed in the developed countries where the social, economic, cultural and political settings are different from what are obtained in developing countries (Recardo, 2004). The implication is that the application of the theories and models in the developing countries may not be very relevant and therefore may not be successful. As it were, many of these developing countries apply these theories and models without thinking about the applicability to their own situations. The result is that most, if not all of these theories and models fail to solve the problems identified. The main reasons have to do with (i) The great diversity in the circumstances of individual developing country (despite some common

characteristics) which make generalization very difficult and (ii) the experiences of the developed countries would not be readily applicable to the developing countries with often-dissimilar situations. Therefore, there is no ready-made theoretical practical solution to the problems of the developing countries; each individual country has to proffer the most suitable solutions to her quest for development (Mabogunje, 2007).

It can be remarked therefore, there is a wide range of views as to the meaning of the term 'development'. For instance, while some view it from the perspective of increase or growth in Gross Domestic Product (GDP) over a period of time (Olajuyin, 1980). Others see development as a process of structural change in the economy, with agriculture declining in importance while the industrial sector increases (Adedeji, 1989). Others, still, tend to stress the human aspect in development. For example, the Guidelines to the fourth National Development Plan (FGN, 1980) states that 'true development must mean the development of man….'

An extension of this view is that even development involves 'creating opportunities for everybody ….'It is worth noting also that the close inter-relationship between economic and social elements precludes any purely social or economic development, but a single process called 'development'.Consequently, in this study on Kogi State, development is conceived to mean improvement in the level of welfare or wellbeing of the people. It is a welfare improvement …a better state of affairs with respect to who gets what, where and how? This state is characterized by ease of access to income earning opportunities and socioeconomic facilities.

2.2 THEORIES OF INEQUALITIES IN REGIONAL DEVELOPMENT

Regional development and planning emerged from the realization that there were inequalities in the spatial distribution of wealth within nations and that the problems posed by rural-urban migration and the existence of large metropolitan area needed to be addressed (Ayeni, 2000). Spatial inequality is an important feature of many developing countries that seems to increase with economic growth and development. Spatial inequalities in income, health, education and poverty present significant economic and political challenges for the governments of many developing counties. This is because rapid economic growth is often associated with uneven regional and urban development, it perhaps means that development is likely to exacerbate rather than reduce spatial inequalities. Yet, despite these concerns, there seems to be little consensus on the causes of spatial inequality and how to respond to growing spatial inequalities.

From the standpoint of economic efficiency, spatial inequality may be beneficial or harmful if spatial inequality results from regional specialization based on comparative advantage or returns to scale in production, then spatial inequality may be beneficial as productivity is increased. But if spatial inequality is caused by external economies that are not internalized, then the level of inequality may not be optimal (Mabogunje, 2007). In particular, spatial inequality in the form of the excessive concentration of urban population in large primate cities may impose a variety of social ills in society. From the standpoint of equity, spatial inequality may be socially undesirable if it contributes to social inequality across regions. Moreover, spatial inequality may be socially destabilizing if the regional divergence in economic welfare and political interests contributes to general social instability.

In recent years, even though research on spatial inequality of developing countries remains in a nascent stage, there has been an explosion of new research on the general causes of spatial agglomeration both theoretical and empirical (Henderson and Thisse 2004). In theory, there have been significant advances in highlighting the micro-foundations of spatial agglomerations; in empirics, the advent of the computer along with advances in empirical methods have greatly expanded the quality of empirical evidence on agglomeration economies.

With this in mind, a basic knowledge of the developments in the theory of economic geography may be needed to evaluate the merits of policies proposed by various scholars. In economics, innovations in theory continue to dictate the course of scholarly discourse. Empirical studies rarely have a decisive impact on policy or theory. While issues concerning regional and urban inequality are usually addressed separately, but there is a problem because their interdependent nature cannot be overemphasis, the fields of regional and urban economics developed separately; the literature on spatial inequality treats regional inequality and urban inequality as two separate phenomena. The most important reason for this dichotomy is due to theory—namely, it is extremely difficult to develop a unified theory of regions and cities in a satisfactory manner (Fujita, Masahisa, Paul Krugman and Anthony 1999).

Only in the extreme case where cities are uniform in size and are uniformly distributed across regions do we expect urban inequality to have limited impact on regional inequality. In reality, city sizes and their geographic distribution are both very uneven, to the extent that industrial revolution and urbanization go hand in hand, the rise of North-South regional core-peripheries are likely to be intimately related to urban

development. The U.S. North-South divergence in incomes and industrial structures between the late nineteenth and the early twentieth centuries coincided with rapid urban development in the North as compared to the South. Even at a more regional level, it is impossible to imagine the rise of the city of Chicago as the mercantile center of the Midwestern U.S. in the late nineteenth century without its access to a rich rural hinterland (Cronon 1991). Conversely, for a given population, the extent of urban scale economies is likely to influence the number of cities and their geographic distribution across regions. In the United States, it is probably not a simple coincidence that urban densities rose significantly when regional inequality rose but fell considerably when regional inequality fell (Kim, 1995, 1998, 2007).

Studies vary greatly in terms of focus, but also in the researchers' methods of measurement of spatial inequality, which often are not comparable. The problem is most severe for studies of developing nations where scholars must resort to survey rather than government census data. Taking into account the dynamic nature of spatial inequality, researchers must be able to evaluate the impact of foreign trade on spatial inequality and, perhaps most importantly, understand the role of political institutions on spatial inequality.

From the perspective of theory, spatial inequality is fundamentally determined by the location decisions of firms and households. Firms choose locations to maximize profits whereas households do so to maximize job market outcomes and utility. While firms and households generally care about the quality of both of their regional and urban environments, there is no widely accepted general theory of spatial location that seems to incorporate regional and urban location decisions in a unified manner (Fujita et al

1999; Fujita and Thisse, 2002; Berliant, 2007). Rather, the field of economic geography is divided into two fields: regional and urban economics (Kim and Margo, 2004).

The traditional regional science models based on the central place theory possessed a regional-urban perspective, but these models have now been discredited as not having a rigorous theoretical foundation. Instead, regional central place theory is not an economic model based on optimization and the equilibrium behavior of firms and households but rather a useful descriptive classification scheme. To reiterate the importance of theory, international or interregional trade models usually do not address cities because neoclassical models based on comparative advantage cannot be easily adapted to incorporate city formation. Starret's theorem demonstrates that regional specialization, cities and trade cannot be equilibrium outcomes under the standard neoclassical assumptions (Fujita and Thisse 2002) models, to the extent that they exist, and are largely based on models of international or interregional trade. While it is impossible to imagine interregional (international) trade without the existence of cities, a simple perusal of standard texts in international trade will reveal a complete absence of discussion on cities. Conversely, urban models are devoid of regional location decisions. In the classic Henderson (1974) model, cities are islands which differ only by scale. The study of the size distribution of cities without references to their locations forms an important research agenda for urban economists.

Since the various theories of economic geography provide different causal explanations for spatial inequality and elicit different policy responses to combat inequality, it is important to review them in some detail. In recent years, theoretical innovations in modeling increasing returns have led to the formalization of many traditional concepts

such as Marshallian externalities (technological spillovers, labor market pooling, access to non-traded intermediate inputs) and non-pecuniary externalities (forward and backward linkages and market size), which in turn has clarified the forces of spatial agglomeration and dispersion.

In general, spatial inequality is the net result of the balance of forces of concentration and dispersion. From the regional perspective, the centripetal forces of geographic concentration are natural advantages, Marshallian externalities, and non-pecuniary externalities, whereas the centrifugal forces of dispersion are immobility in factors and goods caused by high transportation and communications costs. From an urban perspective, the most important difference is the addition of new costs of concentration in the form of congestion costs that result from the fixed supply of land. Concentration leads to increased housing and commuting costs as well as costs caused by greater crime, pollution, and exposure to disease.

Considering the impact of globalization and trade on spatial inequality, the influence of institutions on spatial inequality, and the relationship between household inequality and spatial inequality cannot be overemphasized. First, globalization is a major force in world development today. While the forces that determine the location of firms and households caused by foreign and domestic trade are identical, citizens rarely view the economic impact of foreign and domestic trade in similar ways. Second, regional differences in institutions may affect regional inequality. Furthermore, the distribution of political and fiscal power between the federal, state, and local governments is likely to impact urban inequality.

Third, household income inequality is a big concern because it is important to understand whether spatial inequality contributes to household income inequality. In regional economics, there are two classes of models that possess very different policy implications for dealing with regional inequality. In one class of models based on the standard neoclassical assumptions of constant returns to scale and perfect competition, the role of government involvement is relatively limited to infrastructural investments that affect the mobility of goods, labor, and other factors. Governments may have little ability to influence centripetal forces that are based on comparative advantage stemming from technology or resources, but it may increase regional specialization or inequality by lowering the mobility of goods or may decrease inequality by lowering the mobility of factors.

The potential role for government intervention is significantly higher in the so-called "new models of economic geography" based on imperfect competition and increasing returns. First, due to the potential for "cumulative causation" forces, small subsidies can potentially have significant first-order effects. Second, infrastructural investments that increase the mobility of goods, labor, and capital may have significant impact on spatial inequality due to the self-enforcing nature of increasing returns. Third, since the equilibrium market allocations are inefficient in these models, markets will not reach the optimal level of spatial inequality without government intervention.

When the sources of increasing returns are forward and backward linkages rather than market size and internal scale economies in production, then it is possible to derive an inverted U-pattern of geographic concentration where regional inequality first rises and then falls. Forward linkages exist when increased production by upstream firms

provides positive pecuniary externalities to downstream firms. Backward linkages exist when increased production by downstream firms provides positive pecuniary externalities to upstream firms. When labour is immobile, an initial fall in the transportation costs of final goods leads to geographic concentration and regional inequality, but when transportation costs fall further, then regional inequality declines and the location of manufacturing firms becomes more dispersed. Thus, at least in principle, a policy that significantly lowers the transportation costs of final goods may under certain conditions lead to a long-run reduction in regional inequality.

2.2.1 Economic Base Theory

This theory is an offshoot of the economic base of urban economists. It stresses the importance of resource exploitation, usually minerals, in the development of a region. Export of these resources and other services to other regions of the economy and beyond brings capital into the region concerned which generates multiplier effects (Olaniyan, 2009). The regional export base model was put forward by North (1955) quoted in Olaniyan (2009) and is perhaps, one of the most detailed treatments of such models. North (1955) viewed regional development as being tied to the development of an export base through its multiplier effects.

The development may take place either as a result of the improved position of existing exports relative to competing area or as a result of development of new exports (North, 1955 quoted in Olaniyan 2009). North believed that the development of new exports is fostered through the development of transportation, growth of income, demand, technical innovations and the provision of public overhead capital. The growths of export-based and service industries are reinforced by the inflow of capital from outside, usually from more developed regions (Adefolalu 1991). This eventually makes regional

production to be diversified, thereby creating more staples and reducing the relative importance of the initial investment. Long-run factor mobility among regions, more equalization of capital income and wider dispersion of production can be expected.

McNeil (1993) cited in Todaro (2000) has shed further light on determinants of regional growth. According to the author, the potential volume of regional output is directly related to the resource inputs within the region. These inputs are capital, labour, transportation, technical knowledge and the social system. The researcher argued that the actual realization of regional output would depend on both regional aggregate demand and external demand for the region's goods and services.

It is generally agreed that the works represent a most comprehensive treatment of the process of regional growth. It should be noted, however, that the emphasis of the research is on economic growth rather than development. Gana, 1978 (cited in Todaro 2000), observed that development does not appear everywhere at once but it becomes manifest at points or poles of growth with variable intensity". The author capped it as *"suffering from an obvious neglect of growth strategies".* Economic based theory help in emphasizing the importance of economic activities in regional growth. It could thus be useful in accounting for observed spatial inequalities in development. The theory could, however, not be of much application in the present research (Kogi State) because of paucity of relevant data on economic activities such as industrial output, profits level among other variables in the study area.

2.2.2 Circular Cumulative Causation Theory

Scholars in this school of thought believe that it is very rare to find economic development occurring evenly throughout a given State unit: that what is always

observable is the concentration of development at certain points, regions or urban centres, thereby creating a series of areas of unequal economic prosperity. As originally postulated by Myrdal (1976), the theory state that; "economic progress and change do not call for countervailing changes, but supports changes which move the system in the same direction further than before". Applying this concept to regional development, Myrdal concludes that the free play of market forces increased inequality between regions. That is, once particular regions have move ahead of others in development, new increment of activities and growth will tend to be concentrated in the already expanding regions because of their derived comparative advantages.

A comparative advantage contains multiple equilibria, a slight perturbation caused by an industrial subsidy to an industry in a given region which may increase spatial inequality dramatically. Even if two regions are initially identical, a slight advantage given to one region through tax subsidies may trigger a sharp rise in spatial inequality between these regions. Because increasing returns create a momentum of their own, cumulative causation will lead to the rise of core-periphery regions (Krugman 1991a & b).Krugman's (1991b) explained with two regions and two goods (agricultural and manufacturing). According to Krugman, agricultural good is homogenous and is produced using labour and land under constant returns to scale in a perfectly competitive market; land is immobile; agricultural goods are freely mobile; consumers have Spence-Dixit-Stiglitz preferences for varieties; and goods are produced with scale economies but they can be used both as a final consumption good or as an intermediate good for use in the same industry as in Ethier (1982). This latter specification captures the idea of forward and backward linkages in the sense of Hirschman (1958). Puga, Diego and Anthony (1999), "At high trade costs, firms want to be where final demand

is, so they split between regions. At intermediate levels of trade costs, firms cluster to exploit cost and demand linkages. However, without interregional labour mobility, agglomeration opens wage differences. At low levels of trade costs, firms want to be where immobile factors are cheaper, so they spread across regions again." Small subsidies can potentially have significant first-order effects.

Second, infrastructural investments that increase the mobility of goods, labor, and capital may have significant impact on spatial inequality due to the self-enforcing nature of increasing returns. Third, since the equilibrium market allocations are inefficient, markets will not reach the optimal level of spatial inequality without government intervention. When the sources of increasing returns are forward and backward linkages rather than market size and internal scale economies in production, then it is possible to derive an inverted U-pattern of geographic concentration where regional inequality first rises and then falls. Forward linkages exist when increased production by upstream firms provides positive pecuniary externalities to downstream firms.

Backward linkages exist when increased production by downstream firms provides positive pecuniary externalities to upstream firms. When labor is immobile, an initial fall in the transportation costs of final goods leads to geographic concentration and regional inequality, but when transportation costs fall further, then regional inequality declines and the location of manufacturing firms becomes more dispersed. Thus, at least in principle, a policy that significantly lowers the transportation costs of final goods may under certain conditions lead to a long-run reduction in regional inequality.

Many other writers have also explained the mechanics of the cumulative growth that follows initial investment (growth) in an area or centre to include expansion resulting from successive rounds of subsequent investment in various sectors of the economy, the resulting multiple effects and (forward and backward) linkage and the concomitant intensification to the required threshold of both scale and agglomeration economies to generate significant levels of external economies.

Todaro and Smith (2011) rightly remarked that the concept of cumulative causation is not the only important feature of Myrdal's model. Myrdal pointed out that closely connected with the concept of cumulative causation**,** is the process of interaction between the growth and the stagnant regions. The researcher identifies the operation of two forces in the process of regional interaction. These are the backwash effects' and the "spread effect" Regions where economic activity is expanding generate backwash effects in the stagnant region by interacting with the flow of capital (locally generated), people (skilled labour and the more enterprising young men), and raw materials from these stagnant regions. These flows, by themselves, are the media through which the cumulative process evolves upwards in the expanding regions and downward in the stagnant ones. The author asserts that the provision of low quality infrastructure or the neglect of the backwash areas in term of roads, health and education further frustrate development in these areas.

Against the backwash effects, Myrdal says, are certain centrifugal 'spread effects' of expansionary momentum from the regions of economic expansion to the stagnant regions. The spread effects are benefits arising from the increasing outlet of agricultural and other products of the lagging region to the growth regions, especially if they

stimulate technical advance in the lagging regions. He concludes that if the impact of 'spread' is greater than that of the 'backwash', the process of cumulative causation may well begin in another area leading to the development of new centres of self-sustained economic development.

2.2.3 Trickle Down Model

Hirschman (1958) cited in Todaro and Smith (2011) formulated a model almost identical to Myrdal's using the term 'polarization' and 'trickling down' for Myrdal's 'backwash' and 'spread' respectively. Empirical study on spread and backwash effects in developing countries confirmed that the backwash effects are more pronounced, and spread effects are often confined to the immediate vicinity of the growth centre, from where the forms is that of a distance decay pattern of development change.

Willis (2007) observed that the Hirschman approach relied on income re-distribution and welfare policies to stimulate demand in the less favoured regions as well as offer of direct and indirect incentives from state aids and infrastructural improvements to individual firms to locate to such regions. In essence, the Hirschman form of development was meant to lead to a process of trickle down to the poorest people in society, development benefits were meant to spread to different regions. The implication of this theory is that economic development should be allowed to reach individuals in the society in terms of employment opportunities, increased income and improved quality of life which will reduce spatial inequalities among regions (Owen 1987).

2.2.4 Core - Periphery Theory

This theory is otherwise known as theory of polarized development. Although it was initiated by scholars such as Meier and Baldwin (1963) cited in Friedmann (1972a), it

was brought into the limelight by Friedmann (1966, 1967, and 1972b). Writing jointly with Alonso, Friedmann (1964) defines the terms of the core-periphery concept as follows: For a variety of reasons, activities come to be concentrated in one or a few centres. These centres according to the writer not only grow so rapidly as to create problems of an entirely new order, but they also act as suction pumps, pulling in the more dynamic elements from the more static regions. The author concluded that the reminder of the country is thus relegated to a second-class, peripheral position. This section is thus placed in a quasi-colonial relationship to the centre, experiencing net out flows of people, capital and resources, most of which rebound to the advantage of the centre where economic growth will tend to be rapid, sustained and cumulative. As a result, income differences between centre and periphery tend to widen.

Friedmann (1972a) reformulated this theory in a rethinking after his Venezuelan experience (Friedmann, 1966.) The redefinition set the major areas of innovation changes as the 'centre' and other areas within a given spatial system as the 'periphery'. Like Hirschman, Friedman also agrees that, because unrestrained forces of a dynamic market economy appear to be working against a reduction of the contrast between the centre and the periphery, government intervention along the line of deliberate planning is required to promote the development of peripheral economies. To the credit of Friedmann's core-periphery model, it is applicable in economics, geography, political science and sociology. That notwithstanding, the focus has spatial dimension. It is indeed unlike the equilibrium model, which soothes policy – makers by assuring them that the unhindered operation of market forces will inevitably tend to establish a spatial equilibrium (Friedmann, 1972 b).

The model has been criticized on three major grounds: First, it is of a general and not precise in nature but having specific ideas that incorporate the growth pole concept. Second, Friedmann did not explain why some matrices become administrative centres: and thirdly that eventually, industrial investment is concentrated within these regions. The greatest asset of the model is Friedmann's assumption that once development begins, core or urban areas of dominant importance in the growth process will establish a spatial equilibrium.

In line with the thinking of this concept, many administrations in Nigeria have engaged in deliberate intervention in regional development, especially with the aim of boosting development in the peripheral areas (Umebah and Ebue 2001). One of the key strategies adopted in the nation is to bridge the widening disparities in the level of development between the rural and the urban areas. Hence, the theory is very much relevant to this present study. The growth centre concept (Boudeville, 1966) and the centre-periphery model (Friedmann, 1966, 1967 and 1972 a and b) envisage that development impulses would spread from the centre (core areas) to the surrounding area (periphery). In this case urban centres are core while rural areas are peripheral areas.

It will also be of importance as shown in Puga and Anthony (1999), to see how the extent of regional inequality may be limited by the manufacturing firms and the agricultural sector. The ability to recruit workers from the agricultural sector to the industrial sector brings about inequality. Thus, the potential for agglomeration depends critically upon the labor mobility of workers between the two sectors. Regional inequality generally arises as an economy shifts from agriculture to manufacturing, but

the degree of shift may depend on the rapidity by which consumers increase their expenditure shares in manufacturing.The policy implication of this theory is that governments in Nigeria have been engaging in deliberate intervention through meaningful regional planning in order to reduce to barest minimum the adverse effects of centre-down approach. Emphasis has been shifted to bottom-up approach in which local people can participate in decision making process on matters affecting their condition of living (Olaniyan 2009). In addition, there are rural development strategies such as creation of more States and local government areas, Integrated Rural Development, Community Development programmes, Mass Mobilization, River Basin and Rural Development Authority and Agricultural Development programmes with a bid to narrowing the gap between the centre urban and peripheral areas (rural communities).

Having gone through some theories underlining spatial inequalities in economic growth and development, it is therefore imperative to carry out a scientific research of this nature in order to understand the spatial inequalities in socioeconomic development and the processes that accounted for the pattern of development in Kogi State.

2.3 LITERATURE REVIEW

2.3.1 Evidence of Regional Spatial Inequality

Studies on regional inequality are somewhat challenging to summarize because they differ on many dimensions such as indices of geographic concentration, geographic units of observation, as well as theoretical motivation and empirical specification. In addition, given the difficulty of constructing regional inequality measures that are comparable across many nations, there is no international cross-sectional or panel analysis as in the urban inequality literature or as in the household income literature. As

a result, the literature on regional inequality is dominated by country-specific studies. Nevertheless, the review of the various nations in developed and developing nations may facilitate comparisons.

Due to the scarcity of reliable census data, the evidence for developing nations is often based on survey data and projected population figures (Asolo, 2000). Perhaps due to poor data quality or greater variance in the economic circumstances of developing nations, the evidence on spatial inequality is more varied. For developed nations, even though there are important variations in the level of spatial inequality, the industrial patterns of spatial localization are fairly similar across many countries.

Hafiz, Muhammed, Ibrahim, Watirahyel and Maiwada (2016) investigated the spatial pattern of the distribution of government secondary schools in Giwa zone of Kaduna State in northwestern Nigeria. The analyses were done in a Geographic Information System (GIS) environment. Data used for the study were gathered from both secondary and primary sources. The primary data was obtained using Germain GPS to take the coordinates (longitudes and latitude) of the schools. The coordinates of the schools were recorded in Excel and the Excel file was imported into GIS environment as point data. The point data were overlaid on the shape files of the areas to show the distribution of the schools. A 3km buffer was created around each school to analyze accessibility and patronage pattern of the schools. The study found out that the pattern of the distribution of the schools was found to be uneven in all the three LGAs. It was found that about 80% of the secondary schools are concentrated in the northeastern part of the area covering the headquarters of the LGAs. It also discovered that the southwestern area of the study area were grossly underserved with very few or no

schools. The study therefore recommends that more schools should be provided in the areas that are lacking.

Tari and Iteimowei (2017) examined the source of income inequality in Kogi State using data from Egwemi (2016) research survey. The study covered 240 households administered with questionnaire in Egwemi (2016), information on their socioeconomic characteristics and income. The income components used were wages and salaries, trade and agriculture. The aggregate gini was decomposed based on the income sources. Income from agricultural sources contributed 75.70 percent to inequality, income from wages and salaries, and trade contributed 14.30 and 10.00 percent, respectively. The overall gini index 0.29 showed minimal inequality, further findings revealed that inequality increases with income from agriculture but reduces with incomes from wages and salaries, and trade. The study therefore recommend that efforts should be made to reduce income inequality in Kogi State by promoting on the job-training, providing free education and business friendly environment to encourage small and medium scale businesses and entrepreneurs.

Habibu, Russayani and Roslan (2014) measured the educational inequalities between Northern and Southern regions of Nigeria and compared it with the educational distribution within regions. The study made use of micro data drawn from the Living Standard Measurement Survey (LSM) of 2010 on Nigerians. The survey provides rich data on households' economic and demographic characteristics including educational attainment of about five thousand households across the country. The Theil Index and Decomposition Analysis was employed analyze the data and the result showed that, educational inequality is higher in the North than in the South as 17 out of 19 states of

northern Nigeria have higher Theil index than the national Theil index. Educational attainment and inequality are found to have a negative relationship. The result also indicates that states with higher educational attainment are more likely to achieve more equitable distribution of education. The research recommends the redistribution of educational facilities.

Bernardin (2012) examined the nature and extent of gender and spatial inequalities in educational attainment in Ghana using Gini Coefficient computed on the basis of years of schooling of individual. The research found evidence of gender and spatial inequality in education in Ghana. The three northern regions have lower education attainment as well as higher education Gini coefficients compared to the rest of the country. There appear to be inequality in education attainment with females contributing proportionately more to the within-inequality component of the education Gini. The research reveals a positive correlation between poverty incidence and education inequality. The research recommended a greater equity in educational opportunities across the country.

Akin-Olagunju and Omonona (2014) studied income inequality and poverty in Ibadan, Oyo State. One hundred and twenty households from rural Ibadan were sampled using a multistage sampling technique. The study used descriptive statistics in analyzing socioeconomic variables and Gini coefficient decomposed based on income source used to analyze the contribution of each income source to overall income inequality. The result showed that agriculture contributed about 42% to overall income inequality; non-farm self-employment (NFSE) contributed about 23% while non-farm wage

employment (NFWE) contributed 36%. The result also showed that agriculture and NFSE were inequality-increasing.

The study by Oyekale, Adeoti and Oyekale, (2006) decomposes the sources of inequality and poverty in Nigeria, using household survey data obtained from the National Bureau of statistics (NBS). The results of their study revealed that in 2004, income inequality was higher in rural areas than urban areas. It was also revealed that employment income increases income inequality while agricultural income reduces income inequality. Inequality between States, rural-urban areas, and geographical zones were said to account for the greater portion of observed inequality.

2.3.2 Regional Inequality in Developing Countries

The most striking pattern that emerges from the data on the spatial inequality of developing countries is its varied nature (Gana, 1992). Thus, nation-specific geographic and political factors may play a disproportionately larger role in shaping the patterns of spatial inequality in developing as compared to developed nations. These variations in the patterns of inequality of developing nations present significant challenges in identifying the causes of spatial inequality. The World Institute for Development Economics Research Project of the United Nations University titled "Spatial Disparities in Human Development," directed by Ravi Kanbur and Anthony Venables, presents evidence on the extent of spatial inequality for over 50 developing countries. While the nature of evidence varies considerably across different countries, they argue that spatial inequality has been increasing for many developing countries in recent years.

For many nations, there is evidence that inequality within regions is as significant as inequality across regions. In the East European nations of the Czech Republic,

Hungary, Poland, and Russia, evidence suggests that regional inequalities rose in the 1990s and that regional inequality was the highest in Russia and lowest in Poland (Forster, Michael, David and Timothy, 2005). The data also suggest that the vast majority of the inequality was caused by intraregional rather than interregional variation in these countries.

In Ecuador, Madagascar, and Mozambique, within-community or intraregional inequality was just as important as between-community or interregional inequality. In all these countries, Elbers, Chris, Peter Johan, Berk and Kenneth (2005) found that there are considerable variations in inequality across communities and that geographic location is a good predictor of local-level inequality even after controlling for some basic demographic and economic characteristics.

In some countries such as Brazil, regional spatial inequality was significant but declined between 1981 and 1997 (Azzoni, Carlos, Naercio and Taitane, 2005), but in other countries, regional inequality was stable at relatively low levels. In Peru, regional inequality measured using expenditure and literacy was low and remained relatively low between 1972–93 (Escobal and Torero, 2005). In the Philippines, regional spatial inequality seems to have declined in recent years between 1985–2000 (Balisacan and Fuwa, 2006), as it has also done in Indonesia between 1984–1999 (Friedman, 2005) and in South Africa between 1990 and 2000 (Naude and Krugell, 2003).

2.3.3 Regional Inequality in Developed Countries

For developed countries, the evidence on regional spatial inequality is much more robust and consistent across countries. Despite important variations, the main source of spatial inequality in developed nations seems to be driven by geographic differences in

industrial concentration. Since some industries such as textiles are much more geographically concentrated than industries such as food or electrical machinery, spatial inequality is caused by the spatial variations in concentrated industries. In general, other industries such as agricultural and mining tend to contribute to spatial inequality as natural resources are distributed unequally, whereas most services, especially those that serve local markets, tend to reduce spatial inequality.

For the United States, there is considerable evidence for a long-run inverted U-pattern of regional inequality, especially in the manufacturing sector. Kim (1995) finds that U.S. regions became more specialized or unequal between the mid-nineteenth and the turn of the twentieth centuries and then became significantly de-specialized in the second half of the twentieth century. Similar results are obtained from industrial localization patterns over time. Based on the locational Gini coefficient at the 2-digit and 3-digit industries, Kim (1995) finds that manufacturing industries became more localized between 1890 and the turn of the twentieth century, but then became significantly more dispersed over the second half of the twentieth century. At any given point in time, the traditional, low-tech industries such as textiles, apparel, and tobacco were much more localized than the medium- to high-tech industries such as electricity, transportation, and so forth. Consequently, the gradual shift in manufacturing from low-tech to high-tech industries contributed to the general dispersal of manufacturing over time.

Wu and Gopinath (2008) examined the causes of spatial inequality of economic development in the United States using multistage sampling technique and descriptive statistics in analyzing the data. The study found out that infrastructure, is the primary

cause of the differences in income, employment and development density between the top and the bottom.

For the United Kingdom, Duranton and Overman (2005) show that if a distance-based measure is used to measure localization as compared to the Ellison-Glaeser index, industries in the United Kingdom are much less localized. If they use the Ellison-Glaeser index, they find that 94 percent of UK industries are localized; however, if the distance measure is used, they find that only a bare majority or 51 percent of industries in the United Kingdom are localized whereas 26 percent are dispersed.

For Spain, Tirado et al. (2002) found that the geographic concentration of industries rose remarkably during the industrial period between 1856 and 1893, causing a sharp rise in regional inequality. The UK industry localization patterns at the 4-digit industry level seem to differ slightly from that of the United States; Duranton and Overman (2005) found that textiles, publishing, instruments, and appliances were most localized whereas food and drink, wood, petroleum, and minerals are dispersed. From a longer perspective, Crafts and Mulatu (2006) found that industry localization and regional specialization in the United Kingdom remained relatively stable over a surprisingly long period between 1841 and 1911.

For France, Maurel and Sédillot (1999) used a slight variation of the Ellison-Glaeser index to investigate the geographic concentration in 1993. They found that 27 percent of the French industries at the 4-digit industry level were much localized, 23 percent moderately localized, and that about half of the industries displayed a low degree of

concentration. The most localized industries were extractive industries such as iron ore and coal, shipbuilding, traditional industries such as leather and textiles, and printing and publishing. Least localized industries were motor vehicles, sound recording and reproducing apparatus, farm machinery, electronic components, rubber products, metal work for construction, and nonferrous metals. Surprisingly, they found that the correlation between the U.S. and French industry localization was 0.60; the main outliers were furniture and transportation, which were significantly more localized in the U.S. and printing and publishing, which were more localized in France.

For Europe as a whole, Midelfart, Overman, Redding and Venables (2000) provided a useful summary of the patterns of regional inequality and industry localization for the period between 1970 and 1995. When compared to the United States, European regional specialization or inequality is smaller and European industries are generally more dispersed. Yet surprisingly, European regional inequality in income per capita is higher than that of the United States (Puga and Anthony, 2002).

The trends in European regional industrial inequality seem to differ from those in regional income inequality as well. For most European countries, the industrial structure converged during the 1970s, reversed the trend in the early 1980s, and then diverged significantly toward the 1990s. On the other hand, European regional income per capita converged between 1950 and 1980 and then stopped converging between 1980 and 1995. When the regional incomes were decomposed in greater detail between 1980 and 1995, however, evidence shows that regional inequalities widened significantly but that this divergence was counter-balanced by a substantial convergence in inequalities between countries (Puga and Anthony, 2002).

Midelfart-Knarvik et al (2000) found that many industries experienced significant changes in their location between 1970 and 1995. Many slow-growing, labor-intensive industries were initially dispersed but became more concentrated over time in peripheral low-wage regions (Alonso-villar, 2010). Whereas about half of the geographically concentrated industries remained concentrated over time, many medium-to high-tech industries in high-growth sectors became more dispersed across Europe. Like in the United States, services were generally more dispersed so that the shift from manufacturing to services contributed to the general decrease in regional inequality in Europe.

2.3.4 Evidence of Urban Spatial Inequality

One of the most basic measures of urban inequality is the urban-rural wage gap. Because urban wages are typically higher than rural wages, urbanization introduces spatial inequality in wages and incomes between cities and rural areas as well as cities of different sizes. Rosenthal and Strange (2004), summarizing the evidences from numerous studies that estimated the level of urbanization economies, reported that productivity increased approximately between 3 to 8 percent as a city's size doubles. Similarly, Glaeser and Maré (2001) found that U.S. workers in cities earn 33 percent more than those in rural areas. The urban wage premium is also found by Wheeler (2004) and Kim (2006) among others. Given these findings, the recent urban experience in Africa presents a significant puzzle. Since cities are associated with higher wages and productivity, urbanization is usually correlated with income growth. For example, Henderson (2002) found out, that 70 percent of the cross-country variation in urbanization is explained by variations in GDP per capita.

However, between 1970 and 1995, Africa's GDP per capita fell by 0.66 percent per year but its urban population grew by 5.3 percent per year (Fay and Opal, 2000). Thus, Africa's urbanization may have been caused by "pathological" noneconomic factors such as war, ethnic conflict, or bright lights, rather than by urban agglomeration economies and higher productivity.

Fay and Opal (2000) argued that Africa's level of urbanization is not altogether different from countries with similar levels of income and economic structure. Rather, because Africa was under-urbanized during the colonial period, they suggested that the recent surge in urbanization without growth may be accounted for by a catching-up hypothesis. Kessides (2005) also argued that urbanization in Africa is not excessive or imbalanced, but that the sub-Saharan Africa's urbanization, as well as urbanization in South Asia, Middle East, North Africa, Latin America, and the Caribbean seems only weakly correlated with industrialization. Rather, urbanization in these regions seems to be fueled by the growth in the informal service sector.

However, Barrios, Salvador, Luisito and Eric, (2006) finds that the rural migrants to cities were not pulled by these jobs but rather were pushed out of their rural locations. Climatic change, namely the lack of rain, significantly dampened agricultural productivity in rural sub-Saharan Africa and pushed farmers into cities. In addition, McCormick and Wahba (2003) found that international migrants who return back home brings greater savings into Egypt's urban areas as compared to rural areas further widen spatial inequalities.

The distribution of city sizes by population provides another important alternative measure for urban spatial inequality. Urban inequality is greater when the urban population is concentrated in few of the largest cities but is much lower if the population is evenly distributed across cities large and small. While the estimates are often sensitive to the definition of a city, Rosen and Resnick (1980) found that a large majority of countries possess city-size distribution that favors smaller cities. Thus, urban inequality seems moderate for a majority of nations. However, there seems to be some evidence that urban inequality is greater in developing countries. Soo (2005) found out that, size distribution is significantly skewed toward larger cities in Kenya, Morocco, Mozambique, Columbia, Ecuador, Guatemala, Jordan, Malaysia, Saudi Arabia, and the Republic of Korea but toward the smaller cities in most of the developed nations such as Canada, Belgium, Denmark, the United Kingdom, and the United States.

2.3.5 Evidence of Spatial Inequality in Nigeria

The provision of infrastructural facilities for socioeconomic development in Nigeria varies between one region and another (Habibu, Russayani and Roslan 2014). The provision and spatial distribution of these facilities have been of vital importance in both developed and developing countries. The need to provide facilities is for the purpose of promoting and sustaining growth and development, there is no doubt that equitable and adequate distribution of infrastructure within regions will trigger regional transformation, enhance socio-economic development, and improve the quality of life.

However, available literature indicated that a great proportion of the population still remained deprived (Olayiwola and Adeleke 2005). Several authors have documented the nature of the distribution of infrastructures in rural areas of the country. For

example, Oyekale, Adeoti and Oyekale (2006) reported that the rural areas which harbor about 70% of the Nigerian population is evidently deplorable because they lack the basic infrastructural facilities required for meeting the needs of the modern man.

Similarly, Adefila (2008) reported that in most rural areas in Nigeria, basic infrastructures where they exist at all are inadequate for any meaningful development. According to the researcher, physical infrastructures like motor able roads are often lacking, while many pastoralists and their livestock (in many rural areas) depend on shallow wells and guinea worm-infested ponds for their water supply. In the same vein, Ebehikhalu (2004) documented that in the rural areas of Nigeria, electricity, potable water supply, improved medical facilities which are generally concentrated in the urban centres are just illusive. Thus, the people living in the rural areas lack the necessary attributes and means, which could have been used as catalyst for rural transformation and development (Oyekale, Adeoti and Oyekale 2006).

In recognition of the importance of spatial distribution of infrastructural facilities in the socio-economic development, therefore, various efforts have been made over the years by various governments; non-governmental organizations (NGO) private sector's including local communities to develop strategies and policies to spread these services to all segments of human settlements (Jolayemi, 1992). These efforts according to Afolayan (2008) which are yet to achieve the desired results are manifested in the various successive development and rolling plans in Nigeria.

During the colonial period, the development and provision of infrastructural facilities began with promulgation of 1917 ordinance (Babangida, 1986). This ordinance

classified settlements in the country into three classes: namely, the first, the second and the third class township. The first class township was occupied by the Europeans and their workers. There was therefore heavy concentration of infrastructure in these settlements e.g. Lagos, Calabar, Jos, Enugu, and Benin (Ebehikhalu, 2004; Olayiwola and Adeleye, 2005). The first class township differs from second and third class Township which had little or no facilities; the situation continued until 1952 when local government councils were established (Afolayan 2005). The councils were seen as avenues through which infrastructural facilities in the council's headquarters could spread to other areas under the jurisdiction of each council. This was the situation of infrastructural distribution in the pre independence era.

Since independence, Nigeria has embarked on series of National Development plans and visions in her endless efforts to search for appropriate development strategy. But these development plans and visions seem to have failed to achieve their expected objectives (Alapiki 2009). This is evident from widespread poverty, dilapidated infrastructure, massive unemployment, high incidence of diseases and excessive debt burden among others (Iheanacho, 2012).

Successive governments in Nigeria have adopted development plans as appropriate strategy to address development challenges in the country Asolo (2000). Tordoff (1993) observes that there is a general consensus that the instrument of both diagnosis and remedy to development is the "development plan" In the same vein Adedeji (1989) opines that the economic aspirations of Nigeria since independence are perhaps best exemplified by her various development plans. Since the past four decades, Nigeria has embarked on series of development plans to fasten the rate of economic growth and

improve the standard of living of the people. It is noteworthy that Nigeria has gone through four national development plans in her post-independence history, (the fifth National Development Plan did not materialize) (Iheanacho 2012).

These plans are: First National Development Plan (1962), the Second National Development Plan (1970-74), Third National Development Plan (1975-80), and Fourth National Development Plan 1981-85. Apart from the five year National Development Plans, the Federal Government also embarked on three year rolling plans between 1990 and 1998 and long term perspective planning in her endless efforts to search for appropriate developmental strategy. The federal government introduced another ambitious programme between 2003 and 2007 known as the National Economic Empowerment and Development Strategy (NEEDS). It was a medium term planning which focused on wealth creation, employment generation, poverty reduction and value orientation. Vision 20:2020 was also launched as part of the endless search for developmental strategy aimed at making Nigeria a fully developed economy. Though development planning has been a consistent phenomenon in Nigeria's administrative system, the plans have not been able to achieve the expected results. This is evident from widespread poverty, dilapidated infrastructural facilities, massive unemployment, low capacity utilization, technological backwardness, short-life expectancy, urban congestion, excessive debt burden, environmental degradation and high incidence of diseases which beset the country.

It is obvious that Nigeria is an underdeveloped country and occupies very low position among the poorest countries of the world in spite of her huge potential in natural and human resources. In the opinion of Obikeze and Obi (2004) "a review of the various

plans clearly shows that the country is still very far from where it was envisaged it will be today as at 2017. This is simply as a result of either faulty implementation of the plan, distortions or even non-implementation".

Development planning can be better comprehended by explaining the concepts of development and planning separately. Development is "a multi-dimensional process involving changes in structures, attitudes and institutions as well as the acceleration of economic growth, the reduction of inequality and eradication of absolute poverty (Todaro, 1977). Development is a process of societal transformation from a traditional to a modern society and such transformation is also known as modernization (Sapru, 1994). Hahn-Been (1970) defines development as a process of acquiring a sustained growth of a system's capacity to cope with new continuous changes towards the achievement of progressive political, economic and societal objectives.

Therefore, development is nothing but improving the welfare of the individuals which is usually measured in terms of providing infrastructural facilities that could afford them a chance for better life. Improving the standard of living, education, health and opening out new and equal opportunities for richer and varied life are all important ingredient of development. So there for, the primary goal of development is to improve man and his environment (Iheanacho, 2012).

Planning on the other hand is deciding what actions to be taken in the future for the purpose of achieving organizational goals, it involves thinking ahead, initiating and taking a predetermined course of action and deciding in advance what should be done, how, when and by whom. Without planning, the activities of organizations, institutions,

societies and nations may well become a series of random actions with meaningless objectives (Datta, 2010). According to Cole (1993), planning is an activity which involves decisions about ends as well as means and about conduct as well as result. Planning is deciding what to do, how to do it and who is to do it (Koonzt, Donnel and Weihrich, 2006). Nwachukwu (1998) observed that planning entails determination of control, direction and methods of accomplishing the overall organization or national objective. Plans must be directed and controlled towards achieving desired objectives.

Todaro (1992) conceptualizes development planning as the conscious governmental effort to influence, direct and in some cases, even control changes in the principal economic variables of a country over the course of time in order to achieve predetermined set of objectives". From the above it is obvious that without adequate planning, no meaningful development can take place in any system or State. Development planning as a long-term programme is designed to effect some permanent structural changes in the economy; is connected with the involvement of government in the economy whereby it set out objectives about the way it wants the economy to develop in future and then intervenes to try to achieve those objectives (UNDP, 2008). Development planning involves processes which ensure that national policies and strategies are realized and development concerns at all levels are fully integrated into the overall national development thrust (Datta, 2010). This will help to alleviate the problems of inequality if sincerely pursued.

2.3.6 National Development Planning in Nigeria

Development plans have been accepted as a suitable strategy to address development and inequality challenges in Nigeria. Therefore, the analysis of various development plans in Nigeria before and after independence becomes necessary.

2.3.6.1 Pre-Independence Plan

Nigeria's planning experience began with the Ten-Year Plan of Development and Welfare for Nigeria which was introduced in 1946 by the colonial government (1945-1956) sequel to a circular from the Secretary of State for Colonies to all British colonies, directing the setting up of a Central Development Board (Onah, 2010). The Ten Year Plan of Development and Welfare for Nigeria could not be actually termed as plan in real sense because it contained mainly a list of uncoordinated projects in various regions. The objective of the plan, though not stated was to meet the perceived needs of the colonial government rather than any conscious attempt to influence the overall performance of the Nigerian economy then (Egonmwan and Ibodje, 2001).

The primary interest of the colonial government was to produce agricultural products such as groundnuts, palm oil, and cocoa that were required by the British factories. No attempt was made to articulate and incorporate the needs and interest of Nigerian people into the objectives and priorities of development plans (Onah 2010). Ayo (1988) observed that the programme "suffered from non-specialized colonial administrators approach to development planning, the inadequacy of planning machinery and absence of clearly defined national objectives." The plan also further increased the evil of the inequality in Nigeria. The plan served as a launch pad to subsequent development plans in Nigeria.

2.3.6.2 First National Development Plan (1962-1968)

Immediately after attainment of independence in 1960, the first National Development Plan (1962-1968) was launched. The objectives of the plan were: to bring about equal distributions of national income; to speed up the rate of economic growth; to generate savings for investments so as to reduce its dependence on external capital for the

development of the nation; to get enough capital for the development of manpower; to increase the standard of living of the masses particularly in respect of food, housing, health and clothing and to develop the infrastructure of the nation (Onyenwigwe, 2009). It had a proposed total investment expenditure of about N2, 132million. The public sector was expected to invest about N1, 352.3million while the remaining investment expenditure of N780 million was expected to be made by the private sector (Obi, 2006). Though, the plan appeared impressive, but due to political upheaval in the country which resulted in 30 month civil war, the plan almost became redundant.

The researcher also observed that, the objectives and targets of the 1962-68 plans were too large and over-ambitious and therefore out of tune with financial technical and managerial capabilities of the country. This made the plan to lack clarity and precision in the formulation of objectives and targets (Onah, 2010). Despite the weaknesses of the plan, some major projects were executed during that period. These included the Nigerian Security and Minting Plant, the Jebba Paper Mill, the Sugar Mill, Niger Dam, the Niger Bridge, Onitsha, Kainji Dam and Port Harcourt Refinery. Even with the executed projects, the problem of inequality was not solved because the projects were not evenly distributed in the country; the margin is getting wider and wider.

2.3.6.3 The Second National Development Plan (1970-1974)

At the end of 1970, national reconstruction and rehabilitation were the focus of attention of the federal government. In order to fasten the growth of national economy and ensure equitable distribution of national income, it became imperative to launch the Second National Development Plan. Initially, the plan was meant to cover the four year period, 1970-1974, it was later extended to cover the fiscal year of 1974-1975. The plan

put forward five national objectives: a United, strong and self-reliant nation; a just and egalitarian society; a land of bright and full opportunities for all citizens; and a free and democratic society (Onyenwigwe, 2009). Ayo (1988) outlined the difference between this plan and others as: besides being much bigger in size and more diversified in its project composition, it was in fact the first truly national and fully integrated plan which viewed the economy as an organic unit: the twelve states were fully integrated into national development plan. Also, unlike the first plan, the second plan was formulated wholly by Nigerians.

The total capital projected expenditure of about 4.9 billion was contained in the plan. Out of this figure, the proposed public sector investment was 3.3 billion while the private sector was expected to invest 1.6 billion (Obi, 2006). The highest orders of priorities in public sector projected expenditure were accorded to transport and communication, manufacturing, housing and education (Onah, 2010). Second National Development Plan laid much emphasis on indigenization. In the opinion of Okowa (1991) "indigenization was seen by this plan as an instrument towards the long term objective of economic independence".

Although the Second National Development Plan also attached importance on agriculture, industry and the development of high level and intermediate level manpower, the plan was beset with problems as in the first National Development Plan. Onah (2010) alludes to this fact that "the high priority given to agriculture and industry was not matched with action during the implementation of the plan". One of the basic tenets of Second National Development Plan is indigenization policy. Indigenization policy was carefully designed to encourage Nigerians to participate fully in the

commercial, industrial and financial activities of the Nigerian economy. Several indigenization decrees were made to realize the objectives of this policy.

It is also worthy of note that despite the much talk about indigenization policy, there were over 16 multinational oil companies representing the United States, Dutch, Japanese, British, Italian, German and French interest that had firm and massive grip on Nigeria's Petroleum after the expiration of the plan (Koha, 1994). An interesting feature of the Second National Development Plan was the objective of creating "a free and democratic society" that was being challenged by the military government. This objective was put in place without considering any discussion on political development in the plan document and any means of returning to civilian rule. Despite the inadequacies of the plan, it witnessed achievements in the areas of industry and agriculture.

The industrial sector recorded more improvements. Many industries in the war affected areas were rehabilitated, coupled with establishment of two salt factories in Kaduna. Super phosphates project and two vehicle assembly plants were also established. Other achievements included the establishment of colleges of technology and trade centers by state governments and reconstruction of about 3000 kilometers of roads (Egonmwan and Ibodje, 2001). Despite these achievements, inequality was not resolved in the country; some areas were favored over others.

2.3.6.4 The Third National Development Plan (1975-1980)

The Third National Development Plan had a projected jumbo investment of N30 billion which was later increased to N43.3 billion. This represented ten times that of the

Second Plan and about 15 times that of the First Plan (Obi, 2006). The objectives of the plan were: increase in per capita income; more even distribution of income; reduction in the level of unemployment; increase in the supply of higher level manpower; diversification of the economy; balanced development and indigenization of economic activities (Obi, 2006). The approach of the plan was to utilize resources from oil to develop the productive capacity of the economy and thereby permanently improve the standard of living of the people. Therefore, the plan was premised on the need for the public factor to provide facilities for the poorer sections of the population including electrification, water supplies, health services, urban housing and education (Egonmwan and Ibodje, 2001).

The assessment of the plan showed it focused to give priority to projects and programmes that would directly impact positively on the rural dwellers, but the meager allocations to agriculture and social development schemes did not indicate sincere intention of the government to achieve the objective. According to Okigbo (1989) agriculture and social development scheme (education, housing, health, welfare etc) that have direct bearing on the living conditions of the rural population received only 5 per cent and 11.5 per cent respectively of the financial allocations contained in the plan. It is appropriate to state here that the meager allocation to agriculture and social development schemes, which were priority areas, indicated the "lack of focus of the planners to careful sifting of the criteria for allotting principles" (Onah, 2010).

The third plan did not really achieve its set targets i.e, the desired objectives. Irrespective of the inadequacies of this plan, it witnessed achievements in some areas. In the opinion of Okowa (1991), in terms of achievement, the manufacturing sector

recorded the fastest growth rate with an average of 18.1 per cent per annum. Some other sectors that witnessed growth were building and construction and government services. This aspect of achievement all things being equal should bring development to Nigeria because development comes about through changes induced, framed and generated by deliberate policies and through development agents. If this is sustained, it can spread to the periphery to alleviate inequalities in economic development.

2.3.6.5 Fourth National Development Plan (1981-1985)

The Fourth National Development Plan (1981-85) came on board in 1981. It was the first that the civilian government prepared since the intervention of the military in Nigerian politics in 1966. The objectives of the plan according to Obi (2006) were: (i) increase in the real income of the average citizen; (ii) more even distribution of income among individuals and socio-economic groups (iii) reduction in the level of unemployment and under employment; (iv) increase in the supply of skilled manpower; (v) reduction of the dependence of the economy on the narrow range of activities; (vi) increased participation by the citizens in the ownership and management of productive enterprises; (vii) greater self-reliance that is, increased dependence on local resources in seeking to achieve the various objectives of society; (viii) development of technology; (ix) increased productivity and (x) the promotion of a new national orientation conducive to greater discipline, better attitude to work and cleaner environment. The projected capital investment of the plan was put at N82billion. Out of this figure, the public sector investment was N70.5 billion while the private sector was expected to invest N11.7 billion (Obi, 2006).

According to Adedeji (1989) the plan was "the largest and most ambitious programme of investment over launched in Nigeria". The plan also adopted as its main strategy the use of resources generated from oil to ensure all-round expansion in production capacity of the economy and to lay a foundation for self-sustaining growth (Egonmwam and Ibodje, 2001). It was anticipated in the Fourth Plan that exports led by petroleum products would generate enough funds to actualize the plan that had been formulated. Eventually, the revenue realized from exports was far below anticipated projections. It is a sad commentary that only 54 per cent of the export proceeds projected for the period was realized in 1984. For instance, it was projected that N79.449 million would be earned from petroleum exports between 1980 and 1984, but only N52.78 million some 66.4 per cent of the projected figure was earned (Okigbo, 1989).

With the dwindling resources to finance the Fourth Plan, the Nigerian economy witnessed debt service and balance of payment problem coupled with high level of inflation. Most of the projects that were started at the beginning of the plan period could not be completed and these together with several spillover projects from previous plan had to be abandoned (Jaja, 2000). The growth rate of Gross Domestic Product (GDP) per annum was only 1.25 percent compared to 5.5, 13.2 and 4.6 percent under the previous National Development plans (Onah, 2010). Another problem of this plan was rise in the cost of living that led to a reduction in the standard of living of a common man. There was also phenomenal increase in unemployment among school leavers in the country. Our external reserves kept on declining.

Commenting on the plan, Alapiki (2009) observed that "the plan period 1981-85 proved to be the most dismal in the economic history of Nigeria at that time". The Fourth National Development Plan recorded some achievements in some areas in spite of its drawbacks. The implementation of Agricultural Development Programme (ADP) in most states was successfully completed, the commissioning of Egbim Power Station, Dry Dock Project at snake Island, Lagos and the 87 telephone exchanges located all over the federation which increased the number subscribers to telephone lines from 188,000 in 1981 to 297,000 in 1985 (Egonmwan and Ibodje, 2001).

2.3.6.6 The Fifth National Development Plan (1985-1989)

Due to poor implementation of the Fourth National Development Plan, machinery was put in place for preparation of the Fifth National Development Plan. In order to facilitate the exercise, a conference was held at the University of Ibadan in November 1984 to deliberate on the appropriate mechanisms for the Fifth National Development Plan. The conference suggested some measures which formed the corner stone of the policies and strategies incorporated in the Fifth National Development Plan.

The objectives of the Fifth National Development Plan were: (i) diversification of the nation's economy away from the monoculture one to which it has been pushed by the fortunes of the oil sector; (ii) revitalization of the agricultural sector with a view to achieving thorough integrated rural development programmes; (iii) domestic production of raw materials for local industries in order to reduce the importation of locally manufactured goods and (iv) promotion of employment opportunities in order to arrest the deteriorating mass unemployment (Onyenwigwe, 2009). The primary focus of the plan was to correct the structural defects in the economy and create a more self-reliant economy that would largely be regulated by market forces. The economy was

therefore expected to be restructured in favour of the production sector especially those of agriculture and manufacturing (Onyenwigwe, 2009). More than ever; the linkage between the agricultural and manufacturing sectors of the economy was to be emphasized during the plan (Ayo, 1988). The Fifth National Development Plan did not materialize. It was later incorporated in the Structural Adjustment Programme (SAP). The two year SAP brought to an end the five year planning model in Nigeria. The Federal government changed the two year model to three year rolling plans.

2.3.6.7 The Perspective Plan and the Rolling Plans (1990-1998)

The Babangida government had abandoned the previous fixed five year development plans and replaced it with two types of national plans viz: perspective plan which will cover a period of 15-20 years that will provide opportunity for a realistic long-term view of the problem of the country and the rolling plan which will cover three years subject to review every year to ascertain whether economy is progressing or not. The perspective plan which was to start from 1990 together with rolling plans did not take off until 1996 when Abacha set-up the Vision 2010 Committee.

The main report of Vision 2010 submitted to Abacha government in September 1997 among other things recommended that the vision should provide the focus of all plans including long (perspective), medium (rolling) and annual plans (budgets) (Adubi, 2002). Therefore, the Vision became the first perspective plan for the country even though it failed to proceed beyond Abacha's death in 1998. The three year rolling plan became operational from 1990 with the introduction of the First National Rolling Plan (1990-1992). The primary objective of the rolling plan was to afford the country the opportunity of revision in the "midst of increasing socio-political and economic

uncertainties" (Ikeanyibe, 2009). But the preparation of medium term plans turned out to be a yearly event and became almost indistinguishable from annual budgets and rolling plans are being prepared annually at all levels of government (Okojie, 2002)

2.3.6.8 National Economic Empowerment and Development Strategy (NEEDS) (2003-2007)

When the Obasanjo's government was re-elected in 2003, it realized the necessity for comprehensive socio-political and economic reform of the country since the previous plans did not put the Nigerian economy on sound footings. It was in this context that the National Economic Empowerment and Development Strategy (NEEDS) that appeared to be a road map to address the development challenges in Nigeria were launched. The basic thrust of NEEDS focused on: empowerment, wealth creation, employment generation and poverty reduction as well as value reorientation (NEEDS, 2004).

It is worrisome that the government has not realized most of the professed objectives of NEEDS; this is because many regions are still back ward in terms of socio-economic development infrastructures. Within the period of NEEDS 2003-2007, Nigeria's annual budget crossed the threshold of billions into trillions of naira, but the per capita income of Nigeria falls into the one dollar per head level of the poorest countries (Ikeanyibe, 2009). Education which is expected to empower citizens has witnessed increase in the number of educational institutions from primary to tertiary institutions. The universities have increased from about forty in 1999 and mainly belonging to federal and state governments to about eighty nine in April 2007, with greater private sector participation (Ikeanyibe, 2009). It is regrettable that despite increase in the number of

educational institutions, the cost of education is very exorbitant. For example an average private university charges fees as high as N500, 000 per session. This has led to the reduction of number of citizens that can have access to higher education. Therefore, empowerment of such citizens is grievously hampered (NEEDS, 2004). The universities also are not equitably distributed; access to education by some regions is highly hindered because of distance.

NEEDS had planned to create about seven million jobs by 2007, but the reality is that most policies adopted by the government to realize this objective were inimical to employment generation. In her efforts to reform government institutions, many employees have actually lost their jobs which will eventually affect economic development. The Central Bank of Nigeria alone severed 804 employees through mandatory retirement in 2005 (CBN, 2005). In the area of infrastructural development, NEEDS has also failed to achieve the expected objectives. Electricity which coincidently was a major policy choice area of the government rather than show improvement seemed to have declined tremendously (Ikeanyibe, 2009). The poor supply of electricity in the country has reached a dangerous proportion by 2007.

Adegboyega (2006) observed the fact to look beyond Obasanjo's reformation package if Nigeria must get out of the power quagmire. As a medium term plan, most of the objectives of NEEDS should have been achieved before the expiration of Obasanjo's administration in May 2007. The truth is that NEEDS as a development planning did not achieve the expected results like previous development plans in Nigeria. The four main objectives Viz: employment generation, poverty reduction, wealth creation and

value re-orientation remains only on paper; which has further deepened the problem of inequality in Nigeria.

2.3.6.9 Vision 20:2020

Nigerian leaders under President Olusegun Obasanjo have added Vision 20:2020 to one of its endless search for appropriate development strategy. The objective of the Vision 20:2020 was to make Nigeria one of the first 20 economics in the world by the year 2020 (Adegboyega, 2006). To actualize this lofty dream, Nigeria's GDP per capita was to grow at an incalculable rate (different from the present 0.8%) from US$ 752 to $30,000 at least and the GDP of those countries (over US $29,000) Nigeria wishes to displace and/or join must stop growing (now they grow at 2%) (Eneh, 2011). The rural areas in Nigeria must be transformed from age-long poverty and misery centres to urban status of world standard.

2.3.6.10 Institutions and Spatial Inequality

Institutions matter for growth and development, but they also matter for spatial inequality. While most of the recent studies have focused on understanding the impact of institutions on the development and growth of nations, regional differences in the quality of institutions may also significantly impact regional economic development within nations (Banerjee and Iyer, 2005; Kapur and Kim, 2006; Kim, 2007b; and Bruhn and Gallego, 2007). Moreover, political institutions that determine the distribution of power and fiscal resources between federal, state, and local governments can play a major role in determining spatial inequality (Henderson, 2002; Kim, 2008).

Scholars have proposed a variety of explanations for why nations or regions possess different institutions such as accidents of history (North, 1990), factor endowments

(Engerman and Sokoloff, 1997), climate and native population density (Acemoglu, Simon and James 2001) (Acemoglu, 2002). While differences in the institutions of regions within a nation may be more difficult to sustain than those at the international level, regional differences do persist, and even when these differences are removed, their impact may persist over time especially in developing nations. Political institutions are likely to contribute to urban inequality if property rights are easier to establish and defend in cities where one has access to courts and the legal system.

Moreover, political corruption and instability may also contribute to urban inequality in the form of urban primacy if proximity to a primate city makes it easier to shield oneself from the threat of violence, to make illegal bribes easier to conceal, or to have access to information and communication. In a simplified model, Ades and Glaeser (1995) showed that the benefits of political primacy are likely to be higher in dictatorships than in democracies. Federalism or the balance of political power between the federal, state, and local jurisdictions is also likely to matter greatly for spatial inequality. In the United States, the nation emerged with a weak federal government that gave significant political power to the states and local governments until the second half of the twentieth century. As a consequence, American-style federalism is likely to have contributed to greater spatial equality over time (Kim, 2008). On the other hand, many countries in Latin America emerged with strong federal but weak local governments (Sokoloff and Zolt, 2006). Latin American–style federalism is likely to have contributed significantly to great spatial inequality over time.

2.4 SURROGATES OF SOCIOECONOMIC DEVELOPMENT IN KOGI STATE

The major socioeconomic factors (surrogates) that were used for this study in Kogi State include transport and communication, Education, Commerce and Trade, Health Care and Industries.

2.4.1 Transport and Communication

In Nigeria, prior to the British colonial rule, levels of development were with insignificant difference between regional, urban and rural standards of living. As colonial activities advanced, however, export crop economy was created; the economy was monetized along with the construction of national communication system, particularly railway and the subsequent establishment of new towns. Capitalism as brought by colonialism intensified problems of regional inequality in Nigeria.

Transport and communication are capable of assisting the diffusion of ideas and innovation. In terms of transport, Kogi State connects the Federal Capital Territory with Twenty-two Southern States. Good telecommunications services are available in the state (Canback, 2000). In development process, the role of transport and communication cannot be over-emphasized in that they help in no small measure to spread the benefit of development from the industrial urban centre to the rural hinter-land usually in form of spread effects (Rotimi, 1994). In the same vein, Ogunsanya (2002) had remarked that transport was analogous to internal organs of human body that often worked as the life-wire of our Socioeconomic and political life.

Transportation in Kogi State is considered as an indispensable factor in her economic growth and development. In the past, the general assumption was that transport and development always go together. This idea was so popular that, for some time there

was little critical assessment of the actual contribution of road transport to socioeconomic development (Ellis, 1997). Today, there is widespread agreement among scholars that transport is very important to spatial, economic and social growth; but there is no specific agreement on its specific roles in the developmental process (NISER, 2001).

Three distinct viewpoints however exist on the role of transport in development. Transport may have positive, permissive or negative impacts. (Usman, 2012). On the positive and the permissive impact, Umoh (2000) assessed the impact of rural electricity and roads as facilitators of socioeconomic development of rural areas in Kaura Namoda, Zamfara State and revealed that recent installation of rural electricity supply and construction of access roads has increased volume of investments in areas of transport services and which has contributed immensely to economic growth in the study area.

On the negative impact is the influence of the British political economy in the country as earlier explained in chapter one. Ali-Nejadfard (2000) opined that development propelled along the transportation system, labour moved along the road, the towns and villages that were opportune developed very fast, migration was towards these towns and villages. There was rural depopulation and regional inequality as result of road development. In Kogi State, areas with good road and better communication network are highly populated and with development indicators on ground.

2.4.2 Education

Education is regarded as an engine of growth and plays a unique role in economic development and the social transformation process (Adefila, 2008). Education generally is sine-qua-non for any development effort in both urban and rural areas. In

Kogi State, education is one of their main industries, but how are the schools distributed? In the rural areas, a lot of scholars have advocated informal or non-formal education as more relevant to the development of the rural areas. The development of educational infrastructure is a pre-requisite to national development (Hafiz, et al 2016). Educational facilities are very important in both rural and urban areas. Therefore, therefore, their distribution, accessibility as well as utilization have become issues of interest to geographers, (Olamiju and Olujimi, 2011).

Education is crucial to achieving both the Education for All (EFA) goals, and the Millennium Development Goals (MDGs) aimed at eradicating extreme poverty and hunger, ensuring universal primary education by 2015, promoting gender equity and ensuring environmental sustainability (F.G.N, 2007). In 1996, the World Food Summit in Rome stressed increased access to education for the poor and members of disadvantaged groups, including rural people, as a key to achieving poverty eradication, food security, durable peace and sustainable development. The 2002 World Summit on Sustainable Development, held in Johannesburg, also emphasized the role of education (Claude and Dias 2007).

As the majority of the world's poor, illiterate and undernourished live in rural areas, it is a major challenge to ensure their access to quality education. The lack of learning opportunities is both a cause and an effect of poverty. Hence, education and training strategies need to be integrated within all aspects of sustainable development, through plans of actions. Education provides the means by which skilled national man-power supply is obtained. One of the most outstanding educational problems in Nigeria, as in other parts of the developing world, is the inadequate number of schools secondary

schools especially in the northern part of the country (Inobeme and Ayanwole, 2009). The spatial disparity in the distribution of secondary school is most severe between urban and rural areas. Inobeme and Ayanwole, (2009) observed that even in the urban areas, there is inequality in the distribution of schools due to a number of factors ranging from political to environmental accessibility.

Mustapha, Akintunde, Alaga, Sharafdeen, Sunday, Ibrahim, Hafeez, and Muibi, (2015) used GIS techniques to evaluate accessibility to government primary schools in Ilorin West of Kwara State in northerncentral Nigeria and discovered that, there is a random pattern in the spatial distribution of the schools in the area.

Musa and Mohammed (2012) examined the spatial distribution of secondary schools in Bida Town of northcentral Nigeria. They observed inequality in the distribution of the schools and low level of utilization by the residents.Ogunyemi, Muibi, Eguaroye, Fabiyi and Halilu (2014) employed Geographical Information System (GIS) to analyze accessibility to secondary schools in Ogun State of Southwestern Nigeria. Their findings revealed that only about 50% of the students have good access to schools in the area.Adefila, (2008) in the research "spatial variation in infrastructural development in Benue State" asserted that education affects the pattern of employment, income status, housing, food and nutritional status and the overall level of well-being. It aids development of intellectual abilities, cultural attitudes and the acquisition of skills and knowledge. Bernardin (2012) in the research "Education Inequality in Ghana; gender and spatial dimension recommended for a design and implementation of policies to address gender and spatial inequalities in education and also to tackle within-gender and within- spatial inequalities.

One of the critical problems facing developing countries is the inadequate provision and maintenance of infrastructural facilities and that the poor state of infrastructure in many areas is posing a great challenge to economic development efforts (Abumere, Okafor and Oluwasola, 2002). The proliferation and maintenance of schools connotes that many people would have easy access to education, and subsequently economic development if things are done the way they should. There are schools of different cadre in some part of Kogi State; the availability of these schools is seen to be one of the variables that should have positive contribution to the socioeconomic development of the area, since education is the state's main social industry. Kogi State has a great number of educated youths who are out of job either because of their geographical location or other unforeseen circumstances.

2.4.3 Commerce and Trade

Commerce and trade is the backbone of a developing society. It cannot be over-emphasized in that it helps in no small measure to spread the benefit of development from the industrial urban centre to the rural hinter-land usually in form of spread effects. Commerce and trade is very important to spatial, economic and social growth.

In kogi state, the industry took its foot from the time of the colonial masters where the state capital Lokoja served as the colonial capital. As a result of this, about two-third of the buying and selling in Kogi State are found in Lokoja the state capital. Adefila, (2008) had remarked that the level of buying and selling in any region is a function of the level of development. Regional inequality is a ubiquitous phenomenon in both developed and developing nations. Developing nations are characterized by wide-spread inequality among regions and social groups and especially between the large

expanse of rural areas and a few urban centers where development efforts have been concentrated (Todaro 1992).

In the developing nations, the prevailing inequality is greatly related to their colonial experience. Colonial administration emphasized export production thus there was massive development of export crops and mineral resources within a laissez-faire philosophy of development. The implication is that economic production activities were initiated and concentrated in favorable ecological zones. The concentration of development in a few towns of Zambia, and the emergence of various cash crops or minerals exploitation belts in Nigeria are manifestations of the laissez faire approach to development. (Yunusa, 1991).

Generally, developing nations' economies are predominantly agricultural, lacking essential framework for development. Also lacking are efficient transport services and network, marketing and other such facilities. This is in agreement with the result of Wu and Gopinath (2008), which examined the causes of spatial inequality of economic development in the United States and found out that infrastructure, is the primary cause of the differences in income, employment and development density between the top and the bottom. The colonial administration provided the facilities to enhance administration and commerce. Specifically, transport facilities (roads, rail lines and ports) were developed to ease the problems of evacuation of local resources. The end product has been greater centralization of governmental and economic activities in a few centres to the neglect of other areas of the community. As Todaro (1992) rightly noted, it is hazardous to generalize about all developing nations, but the common problems of poverty, unemployment, inequality and sizable and growing imbalance

between rural and urban areas in terms of incomes and life opportunities are common knowledge. All these problems are linked to existing economic structures and development approaches in these countries.

2.4.4 Health Care Facilities

Health is central to community well-being as well as to personal welfare. It affects educational performance (and thus determines employment prospects) and it is fundamental to people's ability to enjoy and appreciate all other aspects of life (Balogun 2009). There is a close association between health status and the general socio-economic well-being of a population. Ajala and Adeyinka (2001) remarked that accessibility to health care facilities is a major indicator of development and the importance of adequate health care facilities in providing sustainable rural development can therefore not be over-emphasized.

Access to medical services is one of the basic necessities of any modern human community. It is a major complement to a strong, dynamic and progressive society. In Nigeria, health services are provided by the government (Federal, State, and Local Government), private individuals and organizations that establish and run private medical centers USAID, (2006). Health planning did not start in Nigeria until 1946 with the launching of the 1946 – 56 ten year development plans (with emphasis on curative aspect). At the end of the plan period, not much had been achieved because common indicators of health revealed a deplorable situation. In addition, the problems of inadequate and lopsided distribution of these institutions favored the urban areas to the neglect of rural areas where about 75 percent of the population live.

During the Third National Development plan (1975 – 80), the government in an effort to remove the constraints posed by inadequate health facilities, decided to re-organized and re-orientate the health care delivery system. The primary health care system which came into being in 1975 was reorganized and broadened to cater for the need of the population at the grassroots level FGN (1980). To achieve the articulated tasks of implementing the programmes, three levels of responsibilities were identified; Federal, State and Local government. The Federal Government would be responsible for policy and implementation guidelines, resource assistance in the area of manpower guidelines and the coordination of all the agencies involved in the implementation of the activities. The states through their respective ministries of health would execute the delivery of services in the states. The local government had the responsibility of also providing services because of their close proximity to the people with respect to the distribution of health care facilities, personnel, hospital beds and the population they serve. To ascertain the level of proximity to the people in Kogi state, this study became necessary. This is necessary to enable government to determine how best to meet the health-related needs of the population.

Nengak and Osagbemi, (2011) examined and explained the pattern of distribution of health facilities from year 2000 to 2009 in Nasarawa State. Secondary data was analyzed using ratios and percentages. The study showed a progressive trend of development of healthcare facilities and concluded that the most striking features of the distribution of healthcare facilities in the state is the marked concentration of state sector hospitals and key healthcare personnel in the urban areas. In line with this, the study recommends that more incentives must be created to enable healthcare personnel to work in the rural areas.

Oyekanmi, Ayansina, Muyiwa and Jubril (2011) in the geo-political patterns of health care facilities in Kogi State, revealed that two out of the three senatorial districts are lagging behind in the provision of heath care facilities and consequently inadequate development in the two districts. Fanan and Felix, (2014) examined the spatial distribution of health facilities in Benue State. The research used secondary data which was subjected to factorial analysis of variance using factorial uni-variance ANOVA design, which is an extension of one-way ANOVA. It involves the analysis of two or more independent variables at a time. Pearson Product Moment Correlation was also applied to investigate the relationships between population and number of health care facilities. The result shows a positive relationship between the number of health facilities and population of the LGAs. It discovered that the line of fit is linear while the coefficient of correlation is 0.75 which is highly significant at 0.05 confidence level. It implies that the larger the population of LGAs, the greater the number of healthcare facilities provided. This situation therefore negates the principle of equity and social justice. It implies that some LGAs are disadvantaged while others are at advantaged in terms of number of health infrastructures.

2.4.5 Industries

Industrialization is one of the key determinants of the level of socio-economic development of a district. Kogi State possesses a number of industries that have helped in human development and consequently socioeconomic development. Industries in Kogi state includes Cassava Processing industries, Boja Industries, Saw mills Industries, Pure water Industries, Iron and Steel industry, Dangote Cement factory, bread and confessionary industries etc. It is plausible, as some scholars suggest, that the

relative high levels of socioeconomic development in urban areas is as a result of investment decisions made by government that are biased in favour of such areas.

Where industries exist, they are located at the ports to process imports or exports. The ports are usually the capital and possibly the largest city. To take such advantages as nearness to government, transport and communication facilities, labour supply and large market, investment in industry and overhead capital projects have been concentrated in a few towns. Thus, it can be noted that industries, where they exist, were located and developed according to the dictates of markets forces rather than the needs of the people during and after the colonial era (NEEDS, 2004). In West Africa, industrial development followed a laissez faire approach and became concentrated in few centres like Dakar, Abidjan, Tema, Takoradi, Accra, Kaduna, Kano and Lagos. These few towns dominate the economies of their countries (Oduro, Pepra and Adamtey 2014). While cost of living sourced in such few centres due to over concentration of government and port activities, commerce, industry and social services, the vast rural areas remain neglected and poorly developed. The study of Idike (1992) asserted that in most rural areas in Nigeria, basic infrastructure where they exist at all is inadequate for any meaningful development.

In Kogi State the available industries are not commensurate with the number of people that the industries are meant to serve. It is in this line that the State government embarked on different programs among which is Youth Advancement and Development Programme (YAD4KOGI) for youths to alleviate the problem of unemployment in the State.

CHAPTER THREE
STUDY AREA AND METHODOLOGY

3.1 THE STUDYAREA

3.1.1 Location and Size

Kogi state is located between Latitudes 6^0 49″ - 8^0 30″ north of the Equator and Longitudes 5^0 35″ - 7^0 45″ East of the Green Wich Meridian. It is located in the North-central zone of Nigeria with a total landmass of about 30,345.74 Km/Sq and it is the 15^{th} largest State in terms of landmass. It is popularly known as the 'Confluence State' due to the fact that the confluence of Rivers Niger and Benue is at Lokoja, the State Capital. It is the most centrally located of all the states of the federation (Figure 3.1). It shares boundary with Niger State and the Federal Capital Territory, Nasarawa to the north, Benue and Enugu States to the east, while Edo, Ondo, Ekiti and Kwara States are on the western side (Kogi State, 1992).

3.1.2 Climate

The study area has an average maximum temperature of 33.2^0 C and an average minimum temperature of 22.8^0 C. Lokoja, the State Capital is generally very hot between the months of October and April each year, though the intervening harmattan from late November to early February normally cushions its effects. Despite the cushioning effects of the harmattan, there are times when Lokoja the State Capital's weather is unbearable. The climatic condition has in no small measure affected the socio-economic development of the state. People that would have invested in the area have been scared away by the weather conditions of the area. The uncompromising weather condition coupled with the rugged terrain explains why Lord Lugard moved his administrative Headquarters from Lokoja to Zungeru and later to Kaduna. If the administrative Headquarter was not moved there would have been greater concentration of governmental and economic activities which would have led to the development of

the State capital.

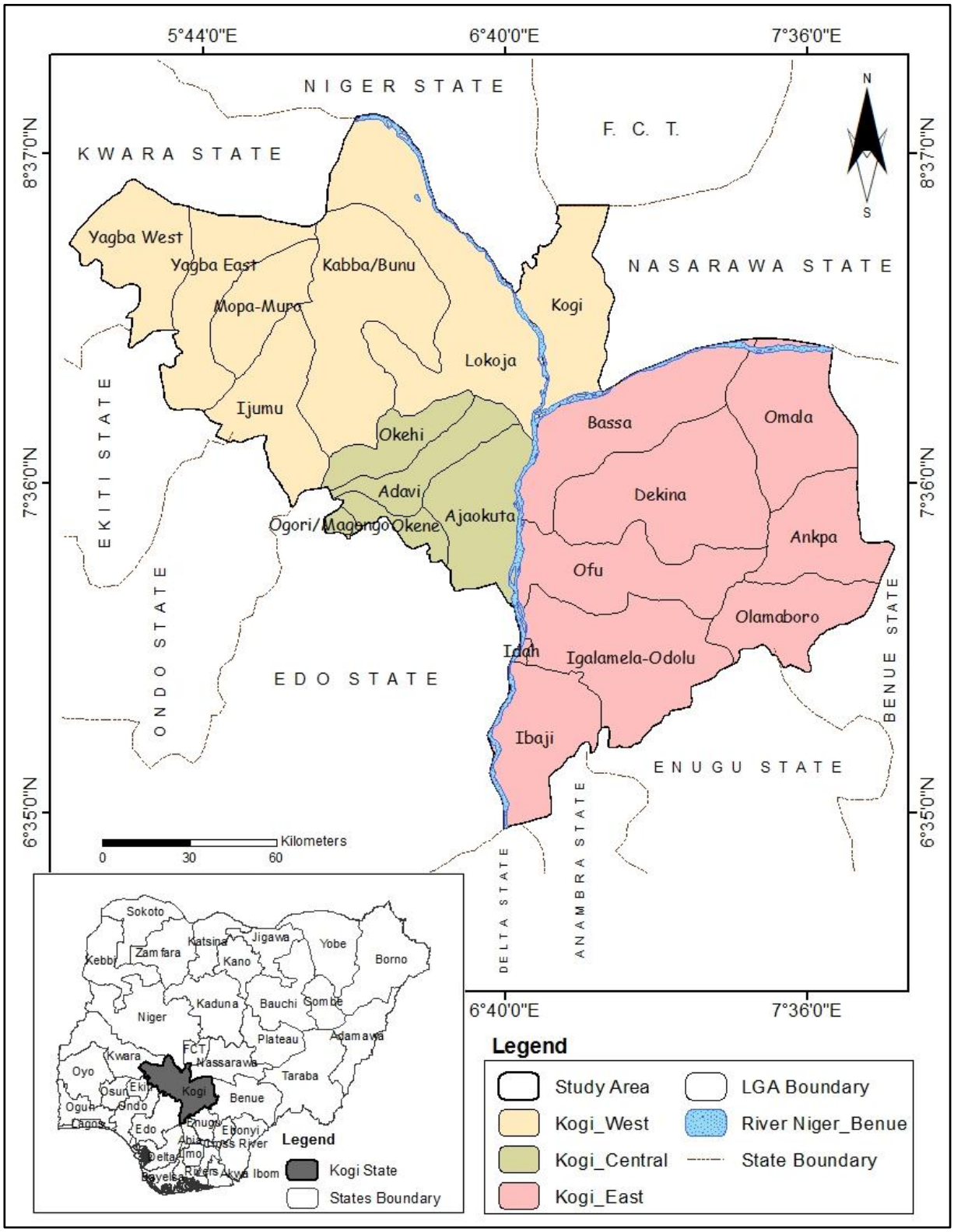


Figure 3.1: Kogi State showing the Senatorial districts and the Local Government Areas

Source: Ministry of Lands and Surveys (2015)

If the state capital is developed there would been a trickling down effect of development to the hinterlands. It is also worrisome that there is prevalence of sleeping sickness and malaria fever which has contributed to the general low population density of the study area which one of the common features of the middle-belt in the country (Sadibo and Jacob, 2006).

3.1.3 Relief and Drainage

The land rises from 300 meters along the Niger/Benue confluence, to the heights of between 300 and 600 meters above sea level in the upland area of Agbaja Plateau and much higher in Okoro-Agbo hills in Ijumu local government area of Kogi State. Like most towns in the Niger-Benue Confluence area, Lokoja is dominated by undulating landscapes, broken by hills formed of resistant rocks and this has profound influence on the pattern of settlement in the study area. The fairly undulating terrain in the eastern region of the state has contributed to high development in such areas as against the western region that is characterized by resistant rocks. Land for development is relatively scarce in the area. The growth of towns is therefore rapidly taking place where the land is relatively flat (Ocheja, 2010). The state is drained by the Niger and Benue rivers and their tributaries.

The rivers have had considerable influence on many phases of human activities including the growth of settlements, transportation and hydro-power (Sadibo and Jacob, 2006). Rivers Niger and Benue have also contributed to the socio-economic development of Kogi State such that most of the dry land that are not properly drained and often considered not very useful for farming due to their low organic content thus, such areas is underdeveloped. An example is the western district of the State. On the other hand there are high densities of population where there are well drained, fertile

soils. Human beings usually settle first in areas of fertile soils and plain land. This is partly why the eastern senatorial district of the State is observed to be more developed than the other areas.

3.1.4 Vegetation

The rain forest vegetation covers Dekina, Ofu, Ankpa, Olamaboro, Idah and Bassa local government areas with rich wooded trees including palms, Iroko and mahogany. The rain forest vegetation is a natural advantage for the eastern senatorial district. It has attracted lumbering activities from the neighboring villages and states which in turn led to the establishment of saw mill industries of various categories in the region. There are more job opportunities in the area compared to the other senatorial districts. As a result of the saw mill industries, other local and small medium scale industries emerges, such as upholstery, carpentry, food vending, snacks and drinks shops and a host of others. All these have led to inequalities in the socio-economic activities of the area. Other local government areas in the west and the central senatorial districts such as Yagba-East, Yagba-West, Kabba/Bunu, Ijumu, Kogi, Mopa-muro, Lokoja and Kogi are in the guinea savannah with some parkland vegetation. The grasses are tall and very luxuriant. These areas do not have the natural advantage of forest vegetation the eastern senatorial district has that has led to some form economic development. The trees in some areas usually appear green during the rainy season with luxuriant leaves but remained open due to bush burning during the dry season. The trees which grow in clusters are up to six meters tall, interspersed with grasses which grow up to about three meters. The trees species include locust bean, shea butter and oil bean trees. The different types of vegetation are however, not in their natural luxuriant state owing to the prevailing human activities (Kogi State MDGs, 2008).

3.1.5 Population, people and Economic Activity

There are three main ethnic groups in the study area namely, the Igalas, Ebiras, and the Okuns with the Igalas being the largest and powerful ethnic group in the State. The State creation exercise of 1967 and the abolition of provinces and regions led to the merging of the then Ilorin and Kabba provinces to form Kwara State with its capital in Ilorin. This Status quo remained until 1976 when, in another state creation exercise, the former Igala division was exercised and merged with Benue province to form Benue State with the headquarters in Markudi. The State was created in 1991 during Babangida's military administration. (Kogi State MDGs, 2008).

The headquarters of the local government areas served as important traditional, cultural and market centres in their localities for varying lengths of time, since the nineteenth century, and sometimes even earlier which may be one of the causes of spatial inequality in socio-economic development of the area. The population is mostly rural communities and the predominant economic activity is agriculture that is practiced at subsistence level of production. The sector employs a vast majority of the total workforce. Farm labour is supplied mainly by families, hired labourers and work groups. Education is the state's main social industry. Each of the local government areas has primary schools and colleges. (Kogi State MDGs, 2008).

3.2 METHODOLOGY

This section discusses the various methods that were used in the generation of study data. The section also highlights the type of data generated, the description of the indicators, sources of data, the sampling design, questionnaire administration and methods of analyzing generated data.

3.2.1 Reconnaissance Survey

A reconnaissance survey of the study area was made to get familiarized and acquainted

with the area. During the exercise, efforts were made to intimate with the village heads, local government council Chairmen, Councilors, civil servants on ground and the Secretaries to all the Commissioners in the Ministries in the state. This was done to solicit for their support in the area of data collection for the study. The reconnaissance survey was successful.

3.2.2 Types of Data Utilized

In line with the objectives of the study, the data used are data on theSelected Socioeconomic Development Indicators as presented in Table 3.1. Data on socioeconomic characteristics of respondents, data on factors responsible for the pattern of socioeconomic development in the study area and data on the challenges facing the development of socioeconomic activities. These socioeconomic development indicators for the study were carefully selected as they are applicable to the study area.

3.2.3 Sources of Data

Data for this study were collected through both primary and secondary sources.

3.2.3.1 Primary Source of Data

The primary source of data was from questionnaire survey. There were two sets of structured questionnaire. One forselected persons of the communities and the second for the Officials of the Local Government headquarters. The selected respondents are community leaders, civil servants, students, traders, farmers and artisans. Structured questionnaire (Appendix 1 and 11) were used to obtain data on socio-demographic profile of the respondents, length of road between settlements and state capitals, education, basic health care services, commerce, trade, social organizations, industries, and the challenges facing their areas and the way forward.

3.2.3.2 Secondary Sources of Data

The secondary data were obtained from relevant government ministries and agencies. The ministries concerned are: Kogi State ministry of works, education, health, agriculture, industry, commerce and trade. Other relevant information was also sourced from published and unpublished materials, relevant books, official gazettes, as well as the internet. Population data were collected from the National Population Commission (NPC) for determining the sample size for the study. Information gotten from these sources was used to develop, improve, and support literature review and field data for this study.

Table 3.1: **Selected Socio-economic Development Indicators**

Dimensions	**Variables**
Transport and communication:	Length of major access roads (Km) per area.
	Number of post offices/ '000 population
	Number of global communication masts
	% of people using mobile phones.
	% of people using radio/television gadgets
Education:	Number of primary schools
	Number of teachers in the primary schools
	Number of secondary schools
	Number of teachers in secondary schools
	Number of tertiary Institutions
	Secondary School Student-Teachers ratio
Commerce and Trade:	Number of markets/ '000 population
	Number of banks/ '000 population
	Number of cooperative societies/ '000 population
	Number of Community development organisation
Health Care and Sanitation	Number of health centres/clinics/ '000 population
	Number of hospital beds per '000 population
	Number of medical doctors per '000 population.
	Number of nurses/ midwives per '000 population
	Number of Pharmacists/ '000 population
Industries	Number of local Craft industries / '000 population
	Number of manufacturing industries/ '000
	Population % of people employed in the industries

Source: Author's Construct (2017)

3.2.4 Sample Size and Sampling Techniques

The twenty-one LGAs were purposely selected for this study (Table 3.2). The selection

was based on the type of study which is to examine and compare the socioeconomic facilities in one area with another. The population of the study area was 3,442,868 comprising of 1,737,317 males and 1,705,551 females cutting across over 564,200 households (NPC, 2007). The population was projected to 4,257,183 in 2016 using 3.18% annual growth rate. The method of Mehta (2004) for population projection was adopted. The formula is stated below:

Pn = P0 (1+ R/100)n----------(i)

Where: Pn = population in the current year (2017)

P0 = population in the base year (2006)

R= annual growth rate

n = number of intermediary years.

To determine the sample size, Krejice and Morgan (1972) method of determining sample size was used which states that: for an area with a population of more than one million (1,000,000) the sample size to be used is 384 and over four million, a sample size of 784.For Kogi State with a total population of 4 257 183, a sample size of 784 was found to be appropriatewith a margin error of 95% gotten from Krejice and Morgan Table.More so, to obtain the proportion of questionnaires to be administered in the LGAs of the state, the sampling method for determining the number of respondents, the study adopted the formular:

$\frac{n}{N} x\ sample\ size\ (784)$---------- (ii)

Where: n = population of each of the Local Government Area

N = Total population for the State.

The method gives each LGA a proportionate share of the sample size according to population size of each unit. The distribution of sample size in the study area is presented in Table 3.2.

Considering the sampling techniques, a multi-stage sampling procedure was adopted. First, a purposive sampling technique was used to select the settlements in each LGA since all the LGAs in the state are involved. The LGA headquarter and other smaller settlements using population figures were purposely selected. Second, in each of the settlement, a random sampling technique was adopted to select the households. The reason behind the choice of the LGA headquarter is because of their position as the most developed and also where information about the whole LGA were sourced.

Table 3.2: **Sample Size by Local Government Areas**

S/no	LGAs	Population (2006)	Projected Pop (2017)	Sample Size	%
1.	Adavi	217 219	279 037	51	07
2.	Ajaokuta	122 321	157 275	29	04
3.	Ankpa	266 176	341 927	63	08
4.	Bassa	139 687	179 440	33	04
5.	Dekina	267 968	335 237	62	08
6.	Ibaji	127 572	163 878	30	04
7.	Idah	79 755	102 452	19	02
8.	Igalamela	147 048	188 896	35	05
9.	Ijumu	118 593	152 343	28	04
10.	Kabba/Bunu	266 176	185 725	34	04
11.	Kogi	115 100	147 856	27	03
12.	Lokoja	196 643	252 605	47	05
13.	Mopa-muro	44 579	56 214	10	01
14.	Ofu	191 480	245 973	45	06
15.	Ogori	39 807	51 136	09	01
16.	Okehi	223 574	287 201	53	07
17.	Okene	325 623	418 292	77	10
18.	Olamaboro	158 490	203 595	37	05
19.	Omala	107 968	138 695	26	03
20.	Yagba-East	147 161	189 658	35	05
21.	Yagba-West	139 928	179 750	33	04
Total	**3 442 868**	**4 257 183**	**784**	**100**	

Source: Computation from the 2006 Population Census

Thirdly, the households selected constituted the units where questionnaire was administered. Ten field staff assistants were recruited for questionnaire administration. The research assistants were undergraduate students from the Federal University Lokoja, Kogi State.

3.2.5 Data Analysis

Considering the large amount of data base involved, the study employed a variety of descriptive and inferential statistical techniques to analyze the data. For the socio-economic characteristics of the respondents, descriptive statistics such as frequency counts, percentages, averages and mean were used to summarize the data into tabular forms, graphs and charts.

Objective i: The standardized score (Z-score) technique was adopted to analyze the spatial pattern of socio-economic development in Kogi State. This technique measures the relative departure of the individual observations from the 'mean' of observations usually expressed in a comparative form Michael, Lewmis, Alan and Tim, 2004). The score of each Local Government Area in each of the variables is standardized into Z-score by changing the scores into zero mean and unit standard deviation. The zero mean was produced and forms the baseline from which departures of scores of observation in particular variable was compared. Standardized score technique (Z-score) was adopted because it affords the opportunity to rank the unit areas in accordance with their performance in the distribution of the facilities in a region. Rotimi (1994) adopted standardized score (Z-score) approach to investigate the spatial variations in socio-economic facilities in Kwara State, Nigeria. Aderamo and Aina, (2011) employed the technique in their study of spatial inequalities in social amenities in developing countries: A case from Nigeria. Fabiyi (2011) also used the method in his study of spatial distribution and performance of water pumps in the rural areas of

Kaduna State. The Z-score is widely used to analyze spatial pattern of distribution of facilities. The model for the study is:-

$$Zi = \frac{x - \bar{x}}{SD} \quad \text{----------(iii)}$$

Where Zi = Standardized score for the ith observation

x = the original of the ith observation

$\bar{x}$= the mean of the value X variable

SD = the standard deviation of the X variable and

$$SD = \sqrt{\sum (x - \bar{x})^2} \quad \text{Michael et al, (2004)-------(iv)}$$

It is the standard deviation that represents the 'root mean square' deviation of observations (LGAs) from the mean. The composite scores are obtained by adding all the standardized scores of the variables for a particular LGA together. This aggregate score or the composite score gives room for the determination of the relative position of the LGAs. In fact, all the Local Government Areas that have positive or negative composite scores are tagged advantaged and disadvantaged respectively. The categorization of the LGAs based on their performance in the distribution of the facilities helps in producing the pattern of distribution. The standardized score technique has become the most versatile available technique, possibly due to its simplicity for easy manipulation and as such, it provides suitable measure of inter-regional comparative studies (Adefila, 2012a).

Objective ii: Location quotient (LQ) was used to analyze the extent of spatial inequalities in socio-economic development in the study area. This technique is concerned with measuring the level of spatial balance in socioeconomic development in the study area. It measures the spatial distribution of a facility. The technique measures the relative regional concentration of a given facility as compared to some regional

aggregate. The co-efficient is derived by calculating each LGA's percentage share of the State population and its percentage share of each of the variables. The differences between the percentage population and share of the parameters are obtained. Thereafter, the sum of the positive or negative difference is calculated for each parameter for all LGAs in the state and the values range from zero to unity, with zero indicating an even distribution of facility and unity indicating that such facility is localized. On the ranking of the LGAs, it is based on the sum of the LQ values for all the variables divided by the number of the variables to arrive at the mean. The mean value for each LGA is arranged in a descending order of performance and categorized into upper, middle and bottom third accordingly. Morenikeji, (1995) employed the method to analyze the spatial pattern of development in Ondo State, Nigeria. Also, Madu, (2007) adopted the method to analyze the distribution of rural infrastructural facilities in Nsukka region of Southern Nigeria.

The LQ model for this study is given as:-

$$LQ = \frac{Si/S}{Ni/N} \quad \text{---------- (v)}$$

where:-

LQ = location quotient

Si = the number of facilities for the local government i

S = the total number of facilities in the State

Ni = population of the local government i

N = population of the State. Beyene, Erebor, Boucher and Chandna, (2005)

The technique is popular for depicting spatial pattern of distribution of facilities in a region.

Objective iii: make a comparative analysis of socioeconomic development among the local government areas. This objective was achieved by the interpretation of the

patterns of development exhibited among the local government areas (LGAs) in objective i above using descriptive statistical statistics such as frequency counts, averages, percentages and Scree Plot to summarize the data into tabular form.

Objective iv: Factor analysis was employed toexamine the factors that are responsible for the spatial pattern of development in Kogi State. This technique was employed to identify and characterize the underlying factors responsible for the spatial pattern of development in the study area. It is useful in identifying the major factors that account for variation in the pattern of socioeconomic development. Jolayemi (1992) used factor analysis to identify the important factors that account for higher percentages in the socio-economic development of settlements in the former Irepodun local government area of Kwara State. In addition, Madu (2007) employed the method to determine the pattern and underlying factors of rural development in Nsukka, South Eastern Nigeria. Afolayan (2008) applied the method to examine the spatial impact of infrastructure-based socio-economic development in the medium towns in Kwara State. The Statistical Package for Social Sciences (SPSS) version 17.0 was employed to analyze the data.

Objective v: Descriptive statistics was employed to examine the challenges facing the development of socioeconomic activities in the study area. This include: frequency count, the mean averages and percentages to explain and summarize the data.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 SOCIOECONOMIC PROFILE OF THE RESPONDENTS

This section provides a better understanding of how availability, access and the utilization of infrastructures are related to socioeconomic development. The summary of respondents' age, gender, marital status, educational attainment, occupation and income were examined.

4.1.1 Gender of Respondents

The study examined the gender of the respondents and the result is presented in Figure 4.1. It showed a very little difference in gender. It was found that 54.5% of the respondents were females while males constitute 45.5%. Out of the seven hundred and eight-four (784) respondents sampled, one hundred and eight (108) of them representing about one-third of the total male respondents are from Kogi central senatorial district, one hundred and forty about one-third are females. Kogi East has 174, which is more than half of the population of the respondents which are males and 190 respondents which is more than half are females. Kogi west has seventy-five which is one-fifth to be males and 97 about one-fourth to be females. The larger number of females to males may be due to the attitude of the respondents and the socioeconomic condition of the area which may be interpreted as, the male as an explorer and known to always want to subdue his environment, seen to be dominant in the quest for knowledge and even in the game of risk taking and always searching for what to give to his family. The males don't have the time and patience to give audience to researchers. The men in the western senatorial district are farmers and lumbermen in the eastern part of the state. The central senatorial district comprise of different occupations.

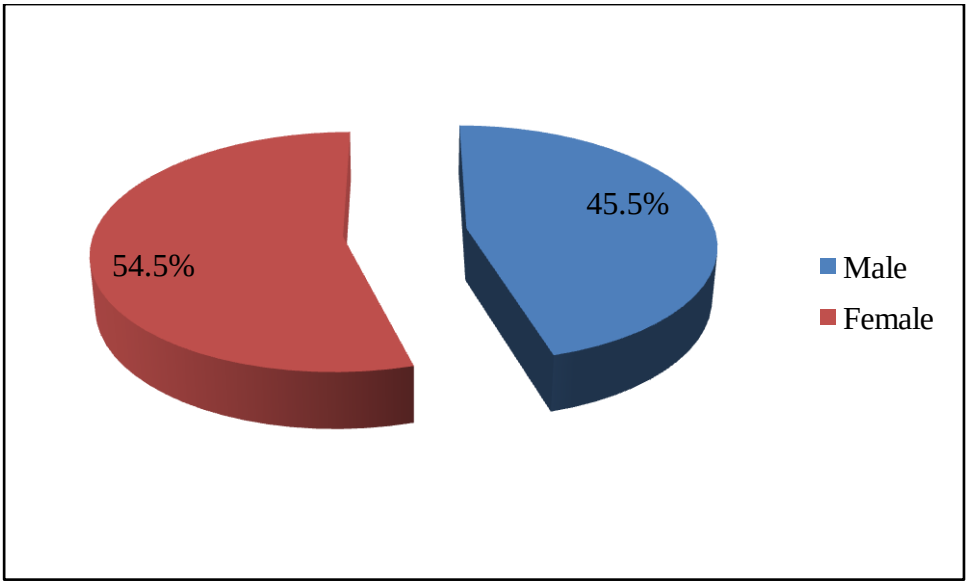


Figure 4.1: Gender of the Respondents
Source: Field Survey (2017)

As reflected in Figure 4.1, a total of 357 males representing 45.5% responded and 427 females representing 54.5% responded. This characteristic implies on one hand, that the males are more into active service than the females, since they did not have time to respond to researchers, because going by the population census of 2006; there are more males than females (NPC, 2007). On the other hand, it may be that the females were easily accessible than the males. It is worthy of note, that if this disparity is true about the State it could be one of the reasons for the underdevelopment in the state.

A large female population cannot induce development as much as when male population is larger, because most of the females are either full time house wives or just having retail shops in front of their houses. Another important factor is that of a range of barriers like reproductive roles, lack of access to productive assets and issues relating to education which is observed to account for the observed gender disparity in income in Nigeria (World Bank, 2009). There are also income disparities which could be traced to work place discrimination in both the private and public sectors for

example; the pay gap between male and female bank managers is significant (Okpara, 2004). A large female population can therefore not induce high development as much as when the male population is larger.

4.1.2 Age-group of Respondents

This is represented with a bar chart to provide a cursory look in Figure 4.2. Respondents of less than 25 years constitute the highest proportion with 41.6%, followed by those aged between 25-29 years (21.8%), 30-39 years (12.1%), 40-49 (21.3%) while those above 50 years (3.2%), constitutes the minority. This type of result may be due to the fact that, the respondents in these age-groups were the ones that were open to questionnaire and gave audience to the researchers. The finding reveals that respondents of 50 years and above are the ones in the civil service. Youths who are agents of development are few in the civil service and some are out of jobs. With this ratio there's bound to be underdevelopment because of unemployment for youths below fifty years of age.

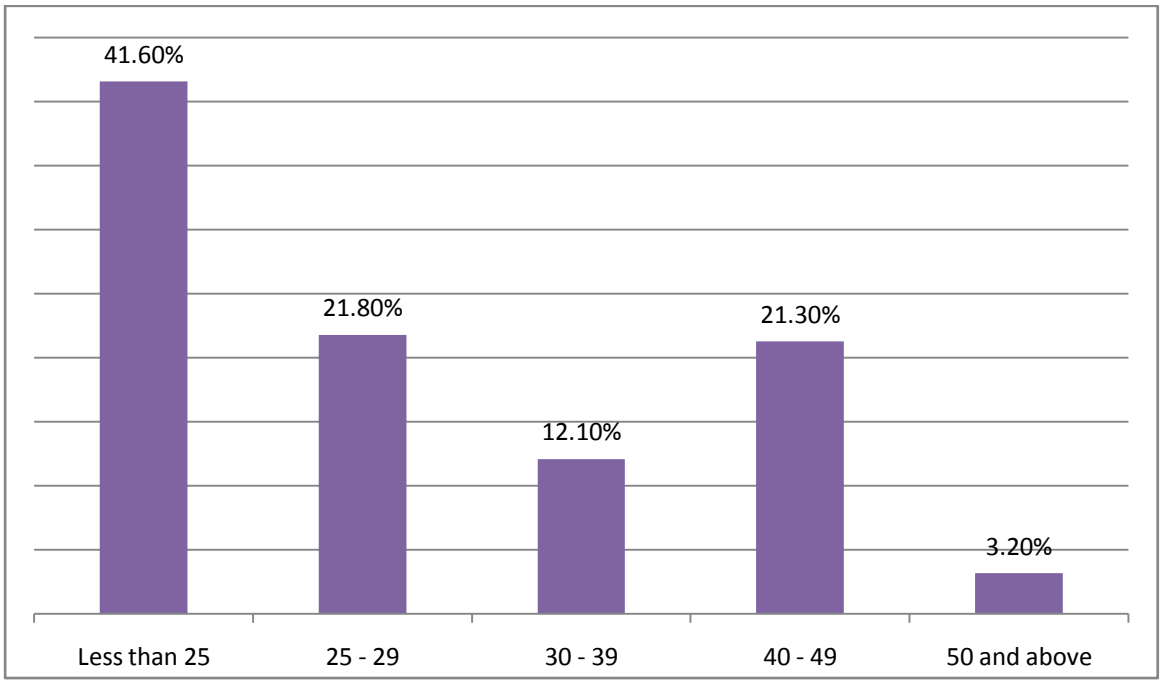


Figure 4.2: Chart showing respondents' age distribution

Source: Field Survey (2017)

This is one of the reasons why the State government embarked on a programme called Youth Advancement and Development Programme (YAD4KOGI) which commenced in the last quarter of 2012 to train young men and women between ages 18 and 35 years old. After the training the youths are then given automatic employment (Kogi State government 2015). This is still new and has not yielded enough positive result, but it is meant to address inequality in socioeconomic development because all the LGAs are supposed to be represented.

4.1.3 Marital Status of the Respondents

Marriage is a legal union of an adult male and female who agreed to live as husband and wife. This is done in conformity with the culture, tradition and religion of the people living in the study area. Figure 4.3 illustrate different type of marital union among respondents. The study discovered that 59.60% of the respondents are married while 40.40% are single, divorced or widowed. This indicates that a higher percentage of the respondents are married which could be a factor for negligence of advocacy for development. Since the attention of the married persons is on their family issues than any other thing. This is represented with a pie chart in Figure 4.3.

The result might also be that people marry very early in the study area considering their ages, this can result in underdevelopment considering the fact that most women remain indoor after marriage which was discovered in some part of the study area. It can also be that many of the unmarried youths tend to leave the villages to urban areas either to school or in search of white collar jobs. This may affect the development of an area. The educated youths that are agents of development are either jobless or out of the village for greener pastures. On the other hand, Kogi East senatorial district with its natural advantage of forest resource have more job opportunities, like furniture making,

food vending, large market and a host of other menial jobs which affords the residents in the area better opportunities and consequently better development compared with the other senatorial districts.

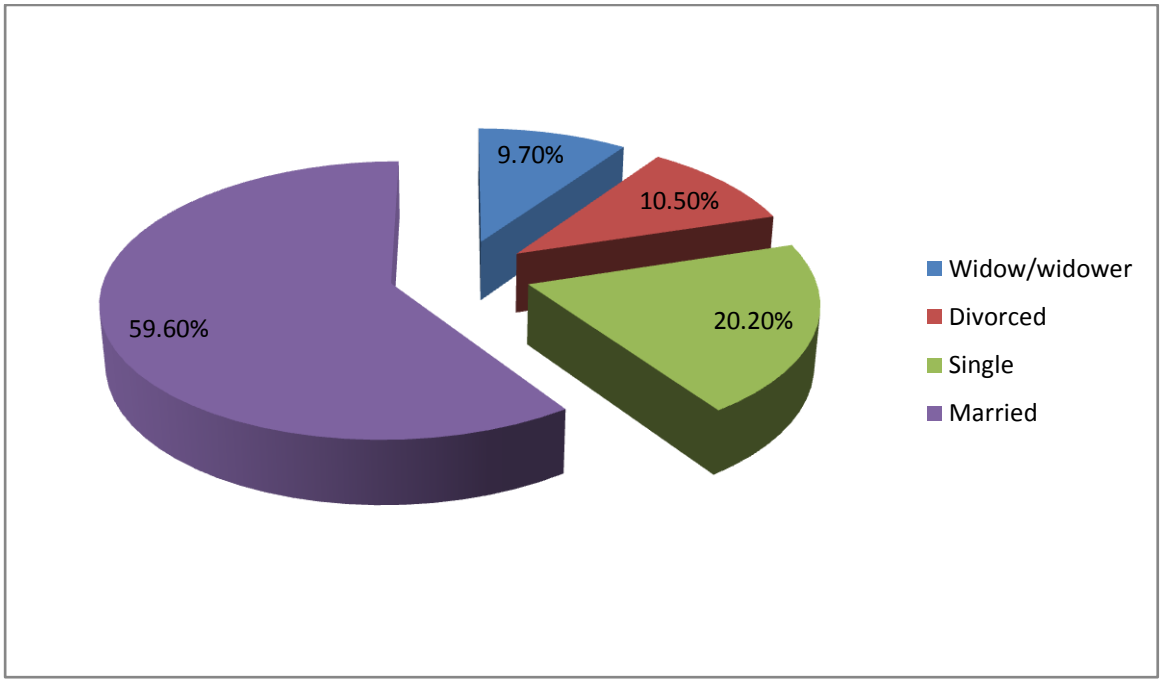


Figure 4.3: Marital Status of the Respondents

Source: Field Survey (2017)

Kogi central has the 2nd largest number of married people when analyzed senatorial by senatorial. The State capital has the highest in this category which is likely to be as result of the advantage of it having the state capital which harbors a large number of people literates and non-literates. The state capital is an urban centre with diverse opportunities for development.

4.1.4 Education Level of the Respondents

Educational attainment is often used as one of the many social and economic indicators to ascertain the state of development in an economy. The study examined the educational attainment of the respondents and the result is presented with a chart. It was

discovered that the literacy level among the respondents is quiet high. A total number of about six-hundred and twenty-one respondents have some form of education while one hundred and sixty- three have no education at all. The study reveals that a high number of the respondents have attended secondary school representing one-third and a good number of them acquired tertiary education representing about a quarter as presented in Figure 4.4. The high number of respondents with good education may be as a result of the proliferations of schools in the state and this is expected to propel development in the region. Idachaba (1985) noted that formal and informal education imparts the ability to read and write and thereby enhances development.

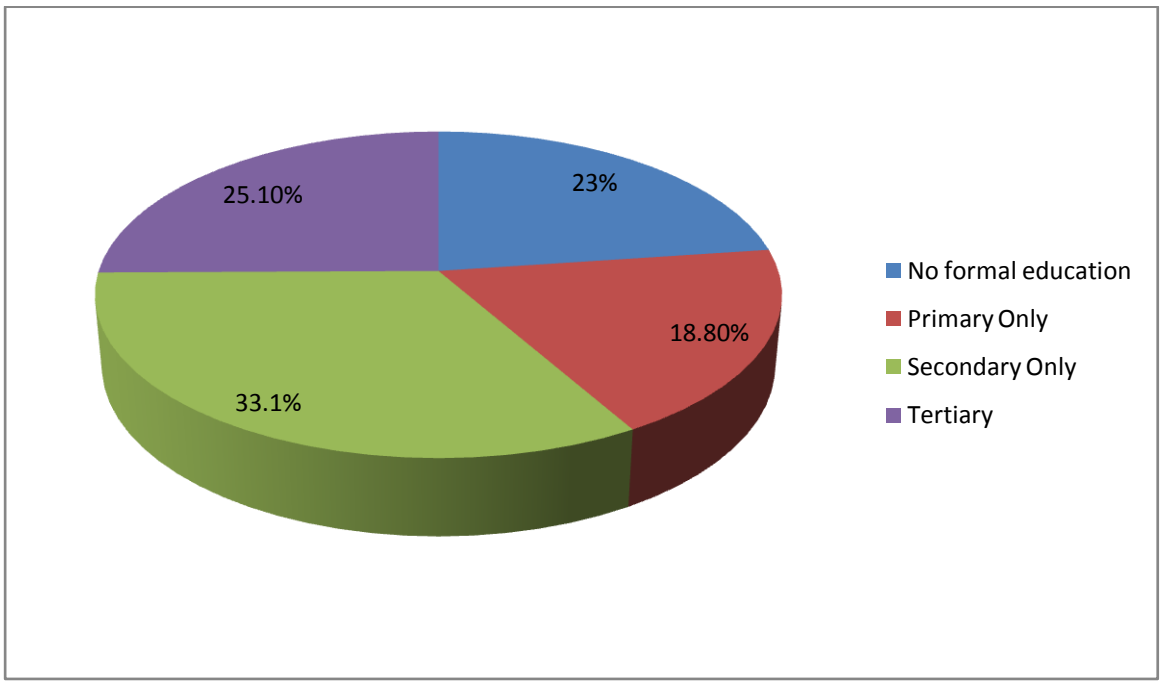


Figure 4.4: Chart showing the Educational Background of Respondents.

In line with this is the UNDP (1990) report that education increases the range of capabilities available to people. The well-educated are in a better position to find employment or earn better wages and are more valuable to the society and better equipped to attract development. With this, one will expect greater development all things being equal but it was discovered that even with the high percentage of literacy

in the Kogi state, development is still at its lowest level in most of the villages. There is also educational gap within as well as across regions. Lower educational inequality has been found to be associated with higher educational attainment level.

4.1.5 Occupation of the Respondents

The study investigated different occupations of the respondents in the study area and result is presented in Figure 4.5. The occupation type of the people is an indication of the socio-economic development of the particular area given that it determines the income level. It revealed that more than half of the respondents are traders; this is followed by respondents that are into farming, while civil servants and others constitute a very little percentage. This result could be as a result of the gender nature of the respondents which is 54.5% females to 45.5% males, since majority of females engage in trading in the study area, the males take into lumbering, welding and the likes (all these are summed up into trading). With the large percentage of respondents in trading, it is expected to trigger economic development.

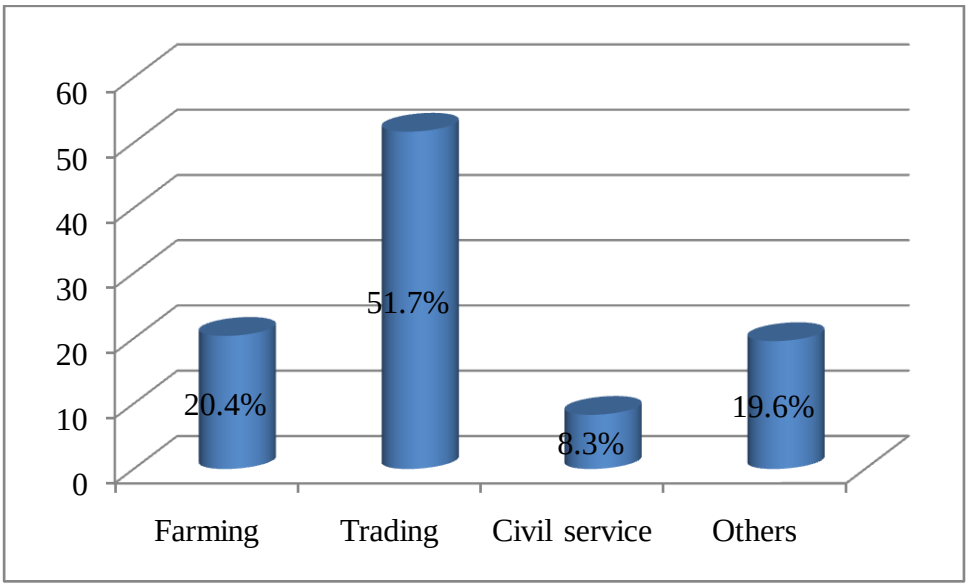


Figure 4.5: Occupation of the Respondents

Source: Field Survey (2017)

The study discovered that, Kogi east senatorial district has a large population in the trade industry by virtue of its location in the rainforest belt. This location has afforded

the senatorial district to have saw mill industries and other small and medium scale industries which emerged as a result of the saw mill industries in the area. This singular point has positive impact on the population of the eastern senatorial district of the state. This is in line with the work of Fanan and Felix, (2014), that there is always a positive relationship between the population and available facilities, the more the population, the more the facilities all things being equal. This relationship put Kogi west and Kogi central at a disadvantage in terms of provision of facilities in the study area. The districts are having a location disadvantage which is responsible for the low population of the district as a result of youths migrating to other regions.

4.1.6 Income Level of the Respondents.

The various income classes of the respondents are presented in Table 4.1. A cross examination of all the LGAs that make up the senatorial districts revealed that majority of the respondents were traders, followed by farmers and then other occupations. This is the main reason why there is a high percentage of people with no fixed income across the three senatorial districts. People with fixed income are very few. This could be a reason for low development because the people with fixed income have low income and their purchasing power will be low. The group without fixed income could at one time have much, at another time little and non at other times.

In the study of inequality, a common element often chosen to measure is individuals' or households' income. Income comprises of salaries and wages, earnings from investments and rents on properties. There is evidence that the income distribution of the state is asymmetric because they are from different source like; agriculture, industries, petty trading and others. This is an indication that the income in the state is

not equitably distributed. This in line with the work of Tari Moses and Iteimowei Major, (2017) who revealed that inequality increases with income from agriculture but reduces with incomes from wages and salaries and trade. The study discovered that, the Local Government areas in Kogi central senatorial district have more population in the civil service than the other senatorial districts and also more development infrastructures were found and the areas are more developed.

Lokoja the State capital and the first capital of Nigeria is a town in the central district which is more developed than other areas in the state. The existing inequality between the state capital and other areas in the state may not be unconnected with the historical and cultural factors that are quiet distinctive with this district.

Table 4.1: Income Level of the Respondents

Income (#)	Kogi Central	Kogi East	Kogi West	Frequency	Percentage
No fixed income	145	242	245	632	80.6
Below 18 000	10	11	4	25	3.2
18 000-20 000	15	10	4	29	3.7
20 000 - 40 000	10	9	3	22	2.8
Above 40 000	42	24	10	76	9.7
Total	222	297	265	784	100

Source: Field Survey (2017)

The study also observed that, the surrounding settlements also enjoy some form of advantages in the form of infrastructures as a form of trickling down effect from the state capital.

4.1.7 Household Size

Household size is one of the indicators used to measure the socioeconomic development in this area especially at the household level. Table 4.2 reveals the household size of the respondents in the study area. The average household size was 5. The implication is that household sizes in Kogi State are average. The net effect is that

all food produced by a household who practice subsistence agriculture could be consumed especially when productivity is low.

Table 4.2: Household Size of the Respondents

Size	Frequency	Percent (%)
Less than 5	320	40.8
5-10 persons	361	46.0
11-15 Persons	103	13.2
Total	**784**	**100**

Source: Field Survey (2017)

Total household spending with this average in rural community will rise. There will be low level of household income, low level of education, little savings and poverty. The nature of the size of the family of respondents could advance the course of development if the children are highly educated. It could also be responsible for underdevelopment if the large family belong to the group of the peasant farmers' group with small income, since majority of the respondents are peasant farmers.

4.2 EXTENT OF SPATIAL INEQUALITIES IN SOCIOECONOMICDEVELOPMENT

The spatial Inequalities in the availability of resources often result in disparities in living standards both in intra and inter-regional levels. The Location quotient was employed to measure the level of spatial balance in socioeconomic development in Kogi State and the result is presented in Tables 4.3 to 4.9. It shows the ranking of the LGAs according to their performances. The raw data presented in Appendix II shows the 23 socioeconomic variables studied in this research work. The results are categorized into three groups of seven LGAs in each category (CTG) as represented in

the last column on the tables. The upper third is the most developed, middle third averagely developed and the bottom third as the least developed LGAs**.** The Tables gives comprehensive analysis of the results.

4.2.1 Performance of the LGAs in Each of the Selected Variables

The Tables reveals the spatial distribution of the socioeconomic facilities that cumulates into development in Kogi state, the variables were analyzed critically one by one. The facilities under transport and communication variable is presented on Table 4.3

4.2.1.1 Spatial Inequalities in Transport and Communication

The result shows that disparity exists among the LGAs, (Appendix II and Table 4.3). The 21 LGAs is divided into 3 categories (CTG), to make seven in each group. The first seven LGAs performed better in the facilities ranked and fell under the upper third in the distribution of transport and communication facilities. In the second group are the LGAs under the middle third. These LGAs performed moderately well in the distribution of the facilities; while the last seven LGAs falls under the bottom third in the ranking which means, these LGAs did not perform well. Figure 4.6 reveals the pattern of the LQ at a glance.

The study observed that some LGAs like Igalamela and Ajaokuta with low score in about four facilities still performed averagely well because of the number of people available to use the facilities. A local government may have ten units of a particular facility and another LGA have only 3; when computed with the statistical method used in this research it came out to be that the facility is localized not proportionately distributed, some facilities have high LQs of 1, which is because of relatively low population sharing available facilities. It shows clearly that some local government areas performed better than others both as a result of either low or high

population exposed to a certain number of resources. This is in line with the works of Ogunyemi *et al* in the research of accessibility to secondary school in Ogun State where the findings revealed lopsidedness in the accessibility to the facility.

Table 4.3: Aggregate LQ Values For LGAs on Transport and Communication

LGA	LQ1	LQ2	LQ3	LQ4	LQ5	Σ	Mean	Rank	Category
Ogori	2.80	1.90	1.32	1.30	1.45	8.77	1.75	1	Upper third
Idah	2.73	1.89	1.30	1.00	1.50	8.42	1.68	2	"
Mopa-muro	1.53	2.08	1.22	2.00	1.48	8.31	1.66	3	"
Omala	2.11	2.58	0.67	1.44	1.27	8.07	1.61	4	"
Bassa	1.01	1.80	1.76	1.50	1.65	7.72	1.54	5	"
Kogi	1.46	1.68	0.49	1.73	0.97	6.33	1.27	6	"
Ijumu	1.23	1.31	0.80	1.47	1.07	5.88	1.18	7	"
Yagba-East	1.74	1.05	0.90	1.10	0.97	5.76	1.15	8	Middle Third
Yagba-West	1.89	0.97	0.81	1.16	0.91	5.74	1.14	9	"
Ibaji	0.32	1.21	1.56	1.27	1.22	5.58	1.12	10	"
Olamaboro	0.60	0.98	1.08	1.22	1.36	5.24	1.05	11	"
Lokoja	0.93	0.59	1.69	0.76	1.18	5.15	1.03	12	"
Igalamela	0.96	0.92	1.29	1.10	1.19	5.46	1.09	13	"
Ajaokuta	1.48	0.63	0.78	0.22	0.91	5.01	1.00	14	"
Dekina	0.87	1.34	1.20	0.67	0.68	4.77	0.95	15	Bottom Third
Ofu	1.26	0.40	1.23	0.71	0.69	4.29	0.86	16	"
Ankpa	0.64	0.73	0.89	0.56	0.79	3.61	0.72	17	"
Kabba/Bunu	0.70	0.56	0.69	0.72	0.74	3.41	0.68	18	"
Adavi	0.53	0.36	0.52	0.92	0.79	3.12	0.62	19	"
Okene	0.46	0.59	0.44	0.57	0.59	2.65	0.53	20	"
Okehi	0.40	0.35	0.64	0.67	0.78	2.13	0.42	21	"

Source: Field Survey(2017)

LQ1--Length of road, LQ2--No of post offices, LQ3--Global comm. Masts, LQ4--% of People using phones, LQ5--% of people using TV sets.

The study also showed a relationship between the number of available infrastructural facilities and a growing population or a zig-zag population. The distribution of some of these facilities is not based on the population distribution in the area. For example, Ogori, Idah and Mopamuro LGAs all fall under the upper category with a very low population and few facilities having a fair shear of this facility. Okehi, Okene and Kabba/bunu fall under the lower third category with their high population. The facility

appears to be localized because of the high population. It is evident that the distribution of these facilities in the study area is unfair, haphazard and not guided by the National Development Plan of the country. This is in line with the work of Adefila (2008) on the regional inequalities in socioeconomic development in Nassarawa State which revealed that socioeconomic facilities in the area of study are inadequate for the teeming population and the economic development at aggregate level is localized and not fairly distributed. The spatial pattern of distribution is depicted in Figure 4.6.

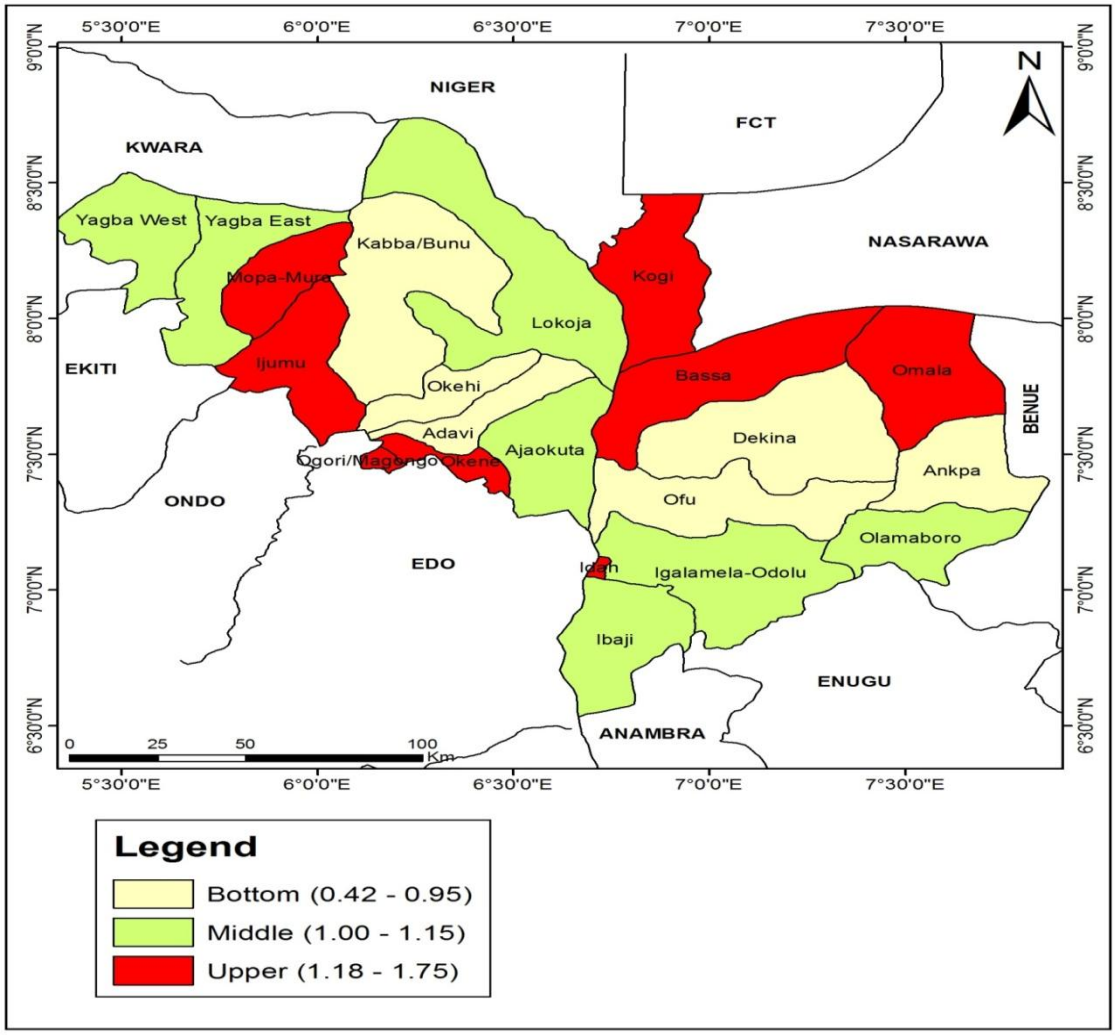


Figure 4.6: The pattern presented by LQ of Transport and Communication

Source: Author's Survey (2017)

4.2.1.2 Spatial Inequalities in Educational Facilities

The result of educational facilities is presented in Table 4.4. Some LGAs performed very well as shown on the table and as such categorized as upper third. The second categories are the LGAs that have few infrastructures and are categorized as the Middle third. The third category of distribution is the lower third. These are LGAs that are disadvantaged in the distribution of the facilities. There is inequality in the distribution of these facilities; the LGAs are highly disadvantaged and as such ranked very low. Ten LGAs recorded mean of 1 with the exemption of a few LGAs. This indicates that some LGAs have achieved a more significant level of social and economic development.

Table 4.4: **Aggregate LQ values on Spatial Inequalities in Education Facilities**

LGAs	LQ1	LQ2	LQ3	LQ4	LQ5	LQ6	Σ	Mean	Ranking	Category
Idah	1.90	1.32	2.22	1.78	1.82	1.86	10.90	1.81	1	Upper
Lokoja	1.57	1.52	1.48	1.79	3.50	1.22	10.80	1.80	2	Third
Ogori	1.14	2.17	1.72	1.96	0.00	3.90	10.89	1.81	3	"
Omala	1.43	1.30	0.79	1.61	2.56	1.60	9.29	1.55	4	"
Ibaji	1.55	1.10	2.46	0.91	1.08	1.41	8.51	1.42	5	"
Igalamela	1.11	1.00	1.36	1.25	1.87	0.97	7.56	1.26	6	"
Bassa	1.79	1.13	0.72	1.28	1.16	1.45	7.53	1.25	7	"
Ijumu	2.06	1.06	2.04	1.12	0.00	0.91	7.19	1.20	8	Middle
Olamaboro	1.15	0.98	0.94	1.07	1.74	0.88	6.76	1.13	9	Third
Dekina	1.19	1.29	1.16	1.13	1.59	0.44	6.36	1.06	10	"
Yagba-west	0.89	0.74	0.90	0.63	0.98	1.78	5.92	0.99	11	"
Kabba/bunu	0.92	0.71	0.88	0.82	1.32	0.75	5.4	0.90	12	"
Ajaokuta	0.62	1.19	0.84	0.89	0.00	1.74	5.28	0.88	13	"
Yagba-East	0.78	0.73	1.04	0.62	0.93	0.61	4.71	0.79	14	"
Ankpa	0.63	0.99	0.86	0.95	0.52	0.57	4.53	0.76	15	Bottom
Kogi	0.61	0.71	1.24	0.78	0.00	1.16	4.50	0.75	16	Third
Mopa-muro	0.76	0.67	0.58	0.55	0.00	1.92	4.48	0.74	17	"
Ofu	1.55	0.44	0.62	0.53	0.00	1.04	4.18	0.70	18	"
Okene	0.48	1.23	0.26	1.00	0.00	0.58	3.55	0.60	19	"
Adavi	0.33	0.51	0.35	0.56	0.00	0.46	3.48	0.58	20	"
Okehi	0.40	0.68	0.46	0.87	0.00	0.71	3.12	0.52	21	"

Source: Field Survey (2017)
LQ1--Number of primary sch. LQ2--No of teachers in primary sch. LQ3--No of secondary sch. LQ4--No of teachers in sec sch. LQ5—Number of tertiary inst. LQ6—Students-teachers ratio.

The study revealed that huge educational gaps exist within as well as across districts. Educational inequality is more pronounced in some LGAs than some others in the study area.Findings of previous studies have shown that education affects the pattern of employment, income status, housing, food and nutritional status and the overall level of well-being (Adefila, 2008), the availability of more schools in some part of the study area than others were seen to have contributed a great deal, to the observed spatial pattern of socioeconomic development in Kogi State.

It corroborates with the work of Musa and Mohammed (2012) on the spatial distribution of secondary schools in Bida Town of northcentral Nigeria. The findings of the work show that spatial inequality exists in the state and that regional disparity has increased rather than diminish over time. This is true of Kogi state that regional disparity has increased rather than diminish over time; this is because some LGAs have been marginalized in the distribution of educational institutions. The pattern depicted is shown on Figure 4.7. Kogi east senatorial district houses two-third of the institutions as against the other two senatorial districts according to the study. It is also in line with the work of Mustapha et al (2015) in the work accessibility to government primary schools in Ilorin West of Kwara State. Findings of their study showed a random pattern in the spatial distribution of the schools in the area.

It also corroborates the work of Ogunyemi et al (2014) in the work accessibility to secondary schools in Ogun State. Their findings revealed inequality in the accessibility to schools in the area.

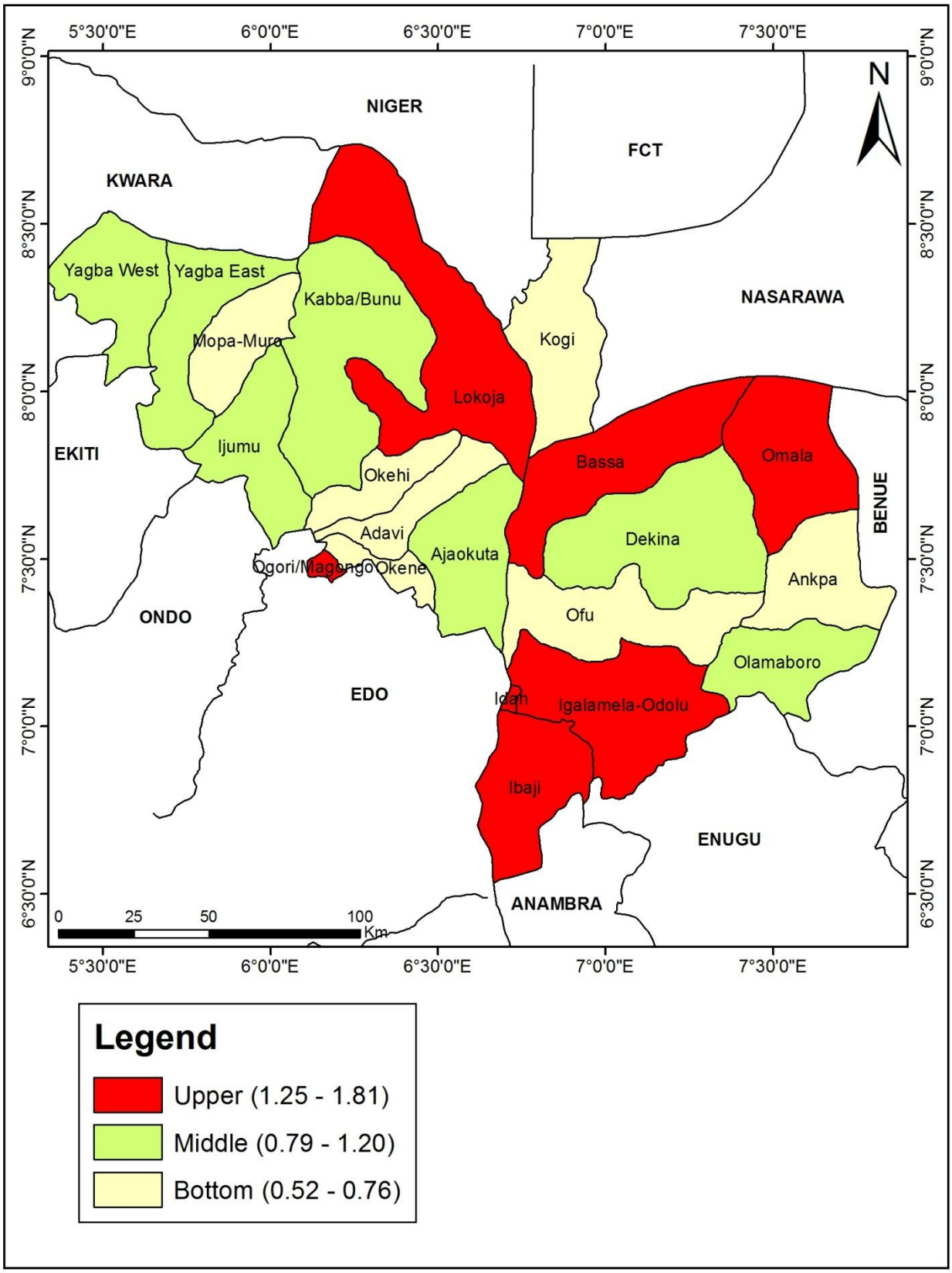


Figure 4.7: **The Pattern presented by LQ of Educational Facilities**

Source: Field Survey (2017)

4.2.1.3 Spatial Inequalities in commerce and Trade.

The Socioeconomic variable viewed here is the commerce and trade variable. The results are presented in Table 4.5. The facilities are presented in the columns LQ1– LQ4. Some LGAs performed well in the facilities observed and as result categorized as the upper third. In the middle third are the LGAs that performed averagely well. The third category named the lower third comprise of the LGAs that did not rank among the upper and the middle third and are so disadvantaged in the distribution of the facilities. The facilities are localized, not spatially distributed; some areas are advantaged in the distribution while some are disadvantaged. And as a result there is spatial inequality in the distribution of the socio-economic facilities in the area. The pattern is depicted in Figure 4.8.

Table 4.5: Aggregate LQ values on Spatial Inequalities in Commerce and Trade

LGA	LQ1	LQ2	LQ3	LQ4	Σ	Mean	Ranks	Category
Ogori	1.39	1.99	1.73	1.50	6.61	1.65	1	Upper
Idah	2.42	1.48	1.16	1.42	8.48	1.62	2	Third
Omala	1.40	1.83	1.70	1.39	6.32	1.58	3	"
Lokoja	0.53	1.51	1.34	2.39	5.77	1.44	4	"
Bassa	1.97	1.41	0.99	1.35	5.72	1.43	5	"
Igalamela	1.78	1.21	1.17	1.15	5.31	1.33	6	"
Olamaboro	1.66	0.75	1.30	1.37	5.08	1.27	7	"
Ibaji	1.62	0.93	0.90	1.03	4.48	1.12	8	Middle
Dekina	1.19	1.37	1.10	0.69	4.35	1.08	9	Third
Ijumu	0.93	1.00	1.16	1.19	4.28	1.07	10	"
Yagba-West	0.89	1.41	1.15	0.81	4.26	1.06	11	"
Yagba-East	0.70	1.07	1.17	0.64	3.58	0.90	12	"
Kabba-Bunu	0.83	0.76	0.88	0.95	3.42	0.86	13	"
Ankpa	0.99	0.89	0.78	0.74	3.40	0.78	14	"
Mopa-Muro	0.49	0.70	0.82	1.00	3.01	0.75	15	Bottom
Kogi	0.72	0.52	0.60	1.06	2.90	0.73	16	Third
Okehi	0.56	0.80	0.92	0.59	2.89	0.72	17	"
Ajaokuta	0.68	0.65	0.56	0.84	2.73	0.68	18	"
Ofu	0.79	0.72	0.66	0.54	2.71	0.67	19	"
Adavi	0.67	0.46	0.84	0.70	2.67	0.66	20	"
Okene	0.63	0.61	0.71	0.52	2.47	0.62	21	"

Source: Field Survey (2017)

Number of markets (LQ1), number of banks (LQ2), number of cooperative societies (LQ3) and the number of community development organizations (LQ4).

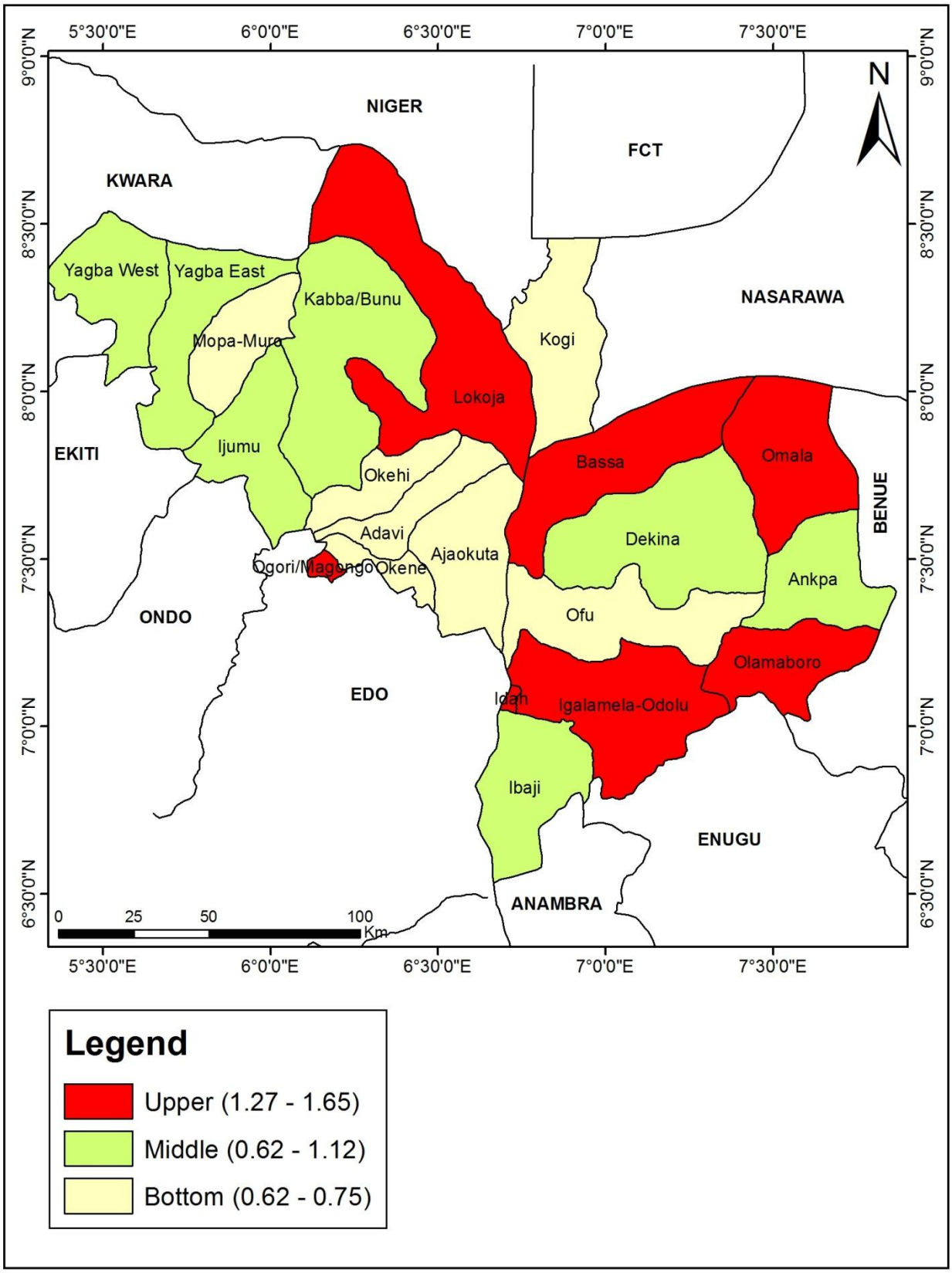


Figure 4. 8: The Pattern of LQ of Commerce and Trade

Source: Field Survey (2017)

This indicates that some LGAs have achieved a significant level of social and economic development than others in this particular facility. Lokoja, the State capital did not even rank among the LGAs that achieved the significant level. This may be among other reasons that there is a very high population competing for the available resources. In the number of banks in the study area, ten LGAs recorded fair distribution. In this facility, some LGAs achieved a more significant level of social and economic development than others. In the number of cooperative societies, eleven LGAs recorded fair share while ten LGAs performed just better. The LGAs performed fairly well since more than half of them have LQs 1 indicating a fair distribution of the facility. Another facility under this variable is the number of community development organizations. Under this facility, eleven LGAs have LQs of 1 showing that they performed well. Ten LGAs have their LQs less than 1 and as such did not perform well in the facility.

Generally, in this socioeconomic variable, eleven LGAs have LQs of one and above. The table also revealed that some facilities are not equitably distributed; there is a degree of localization in the distribution of the facilities. This is in agreement with the work of Akpan (2000) in Akwa Ibom state which established that significant differences exist in level of development among the administrative units of Akwa Ibom state which is categorized into three classes as the developed, fairly developed and the disadvantaged. The distribution of these facilities in the study area (Kogi State) reveals an inequality in the distribution of the facilities. Commerce and trade in this study have contributed to the observed spatial pattern of socioeconomic development in the State.

4.2.1.4 Spatial Inequalities in Health care Facilities

Table 4.6 shows the result of the study with five facilities represented in five columns. The resulst of these facilities are represented with LQ1 – LQ5 in the column. In the first

column, Twelve LGAs recorded LQs of less than 1; in this facility, nine LGAs have LQs above 1 indicating a poor performance of the LGAs in the facility.

Table 4.6: Aggregate LQ values on Spatial Inequalities in Health Care Facilities

LGA	LQ1	LQ2	LQ3	LQ4	LQ5	Σ	Mean	Rank	Category
Idah	1.86	1.89	1.92	1.78	2.14	9.59	1.92	1	Upper Third
Ogori	0.93	1.79	2.32	1.39	2.36	8.79	1.76	2	"
Bassa	2.29	1.74	1.76	1.09	1.35	8.23	1.65	3	"
Omala	1.03	1.24	1.71	1.54	2.32	7.84	1.57	4	"
Olamaboro	1.92	1.05	1.36	1.31	1.56	7.20	1.44	5	"
Igalamela	1.67	1.22	1.46	1.32	1.28	6.95	1.39	6	"
Lokoja	0.89	0.93	1.09	1.55	2.39	6.85	1.37	7	"
Dekina	1.80	1.00	1.18	1.06	1.20	6.24	1.25	8	Middle
Ijumu	1.05	1.37	1.03	1.40	0.79	5.64	1.13	9	Third
Ibaji	1.11	1.31	1.21	1.30	0.25	5.18	1.04	10	"
Ofu	1.37	1.21	0.80	0.58	0.82	4.78	0.96	11	"
Ajaokuta	0.69	1.32	1.00	1.36	0.26	4.63	0.93	12	"
Kogi	0.97	1.37	0.80	0.48	0.54	4.16	0.83	13	"
Mopa-Muro	0.69	1.24	1.09	0.74	0.28	4.04	0.81	14	"
Yagba-East	0.80	0.66	0.83	1.03	0.63	3.95	0.79	15	Bottom
Yagba-West	0.55	0.75	1.10	0.99	0.45	3.84	0.77	16	Third
Kabba-Bunu	0.64	0.77	0.59	1.00	0.76	3.76	0.75	17	"
Okehi	0.36	0.61	0.82	0.74	0.84	3.37	0.70	18	"
Okene	0.49	0.48	0.57	0.64	0.96	3.14	0.63	19	"
Ankpa	0.58	0.79	0.58	0.52	0.59	3.06	0.61	20	"
Adavi	0.50	0.80	0.57	0.57	0.29	2.73	0.55	21	"

Source: Field Survey (2017)
LQ1--No of health centres, LQ2--No of hospital beds, LQ3--No of medical docs, LQ4--No of Nurses, LQ5--No of pharmacists

There is disparity in the distribution of this facility among the LGAs. In the second facility which is the number of hospital beds, some LGAs performed very well in the distribution the facility. More than 50% of the LGAs have LQs of 1 with the exemption of eight LGAs which have LQs below 1; the facility is relatively spatially distributed. In the third column which is the number of medical doctors, thirteen LGAs recorded LQs equal to or greater than 1. The LGAs performed equally well in the distribution of this facility which means that the facility is fairly distributed for these LGAs.

Eight LGAs however have LQs below 1 in this facility; there is an uneven distribution of the facility. The last facility under this socioeconomic variable is the number of pharmacists. Thirteen LGAs have LQs of 1 which constitutes about 61.9% and eight LGAs (38.9%) have LQs below 1. This facility is localized; all the LGAs are not able to get a fair share of the facility. In the overall result, of all the facilities used, it was discovered that some LGAs performed better than other LGAs. According to their performances in each of the variables used, the first category of seven LGAs is grouped as the Upper Third; this is because they performed better than the remaining LGAs when ranked. The second group is the Middle Third that performed averagely in the ranking on the table, and below the ladder is the bottom Third which is the disadvantaged LGAs. Fig 4.9 depicts the pattern of distribution of the facilities in the study area.

The pattern of distribution is in agreement with the work of Nengak and Osagbemi (2011) where they examined and explained the pattern of distribution of health facilities in Nassarawa State of Nigeria. The study discovered that, there is a positive relationship between the number of health facilities and population of the LGAs. It discovered that, the larger the population of LGAs, the greater the number of healthcare facilities provided. This situation negates the principle of equity and social justice. In Kogi State many LGAs have high number of medical facilities because of their prominence as LGAs headquarter and hence have served as sunking pump that draws people from the surrounding settlements. The result of the finding also corroborates the work of Oyekanmi et al (2011) in the study on the geo-political patterns of healthcare facilities in Kogi State, Nigeria. It discovered that a particular senatorial district is favoured in the distribution of health facilities in the study area. This indicates that

there is a high level of inequality in the distribution of this socioeconomic variable in Kogi state, Nigeria.

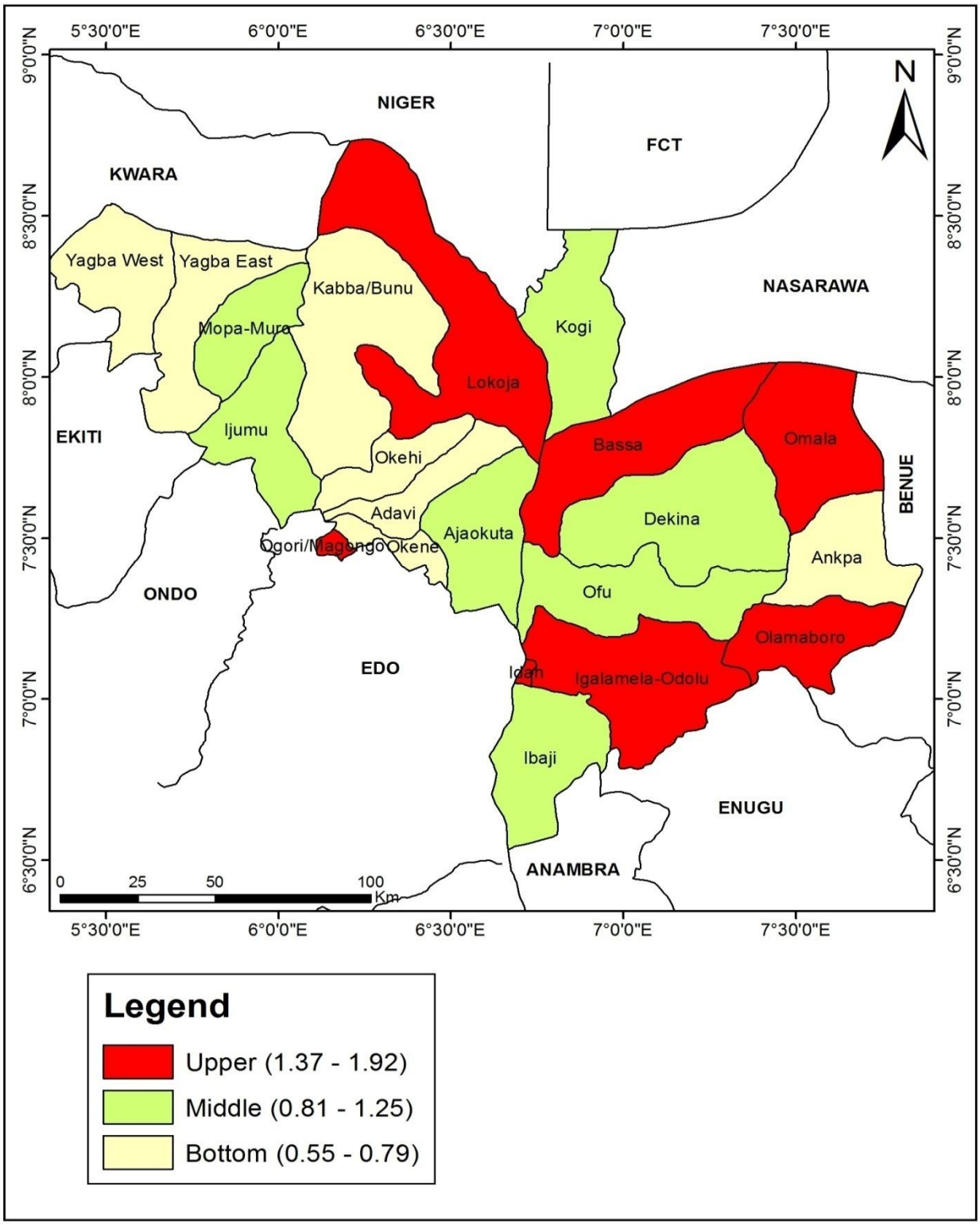


Figure 4. 9: The Pattern of LQ of Health Care Facility

Source: Field Survey (2017)

4.2.1.5 Spatial Inequalities in the distribution of Industries

The location quotient of industries is presented in Table 4.7 showing the distribution of Industrial facilities. The first column which is the distribution of local industries, nine LGAs have LQs equal to 1, and twelve LGAs have LQs below 1, meaning that the facility is not equitably distributed. A greater number of the LGAs display inequality in the distribution of this facility. in the distribution of manufacturing industries, nine LGAs have LQs equal to 1; indicating that these LGAs, Ogori, Ijumu, Bassa, Idah, Ajaokuta, Kogi, Kabba-bunu, Omala and Ibaji have a relatively fair share of the facility compared to the remaining twelve LGAs. The facility is also not equally distributed among the LGAs in the state but localized.

Table 4.7: Aggregate LQ values on Spatial Inequalities in Industries

LGA	LQ1	LQ2	LQ3	∑	Mean	Rank	Category
Ogori	1.96	1.90	1.98	5.84	1.94	1	Upper Third
Idah	1.90	1.06	1.90	5.66	1.88	2	"
Bassa	1.88	1.92	1.80	5.60	1.87	3	"
Ijumu	1.33	1.93	1.13	4.39	1.46	4	"
Ajaokuta	1.80	1.56	0.69	4.05	1.35	5	"
Ibaji	1.48	1.20	1.19	3.87	1.29	6	"
Kogi	1.46	1.50	0.80	3.76	1.25	7	"
Dekina	0.81	0.88	1.94	3.63	1.21	8	Middle Third
Omala	1.26	1.24	0.93	3.43	1.14	9	"
Lokoja	0.65	0.97	1.71	3.33	1.11	10	"
Olamaboro	0.93	0.73	1.17	2.83	0.94	11	"
Kabba-Bunu	0.91	1.29	0.61	2.81	0.93	12	"
Igalamela	0.86	0.78	1.14	2.78	0.92	13	"
Ofu	0.77	0.80	0.83	2.40	0.80	14	"
Okehi	0.94	0.86	0.45	2.25	0.75	15	Bottom Third
Mopa-Muro	0.59	0.93	0.66	2.18	0.72	16	"
Yagba-West	0.75	0.55	0.78	2.08	0.70	17	"
Yagba-East	1.12	0.34	0.67	2.13	0.71	18	"
Ankpa	0.85	0.39	0.85	2.09	0.69	19	"
Okene	0.52	0.65	0.46	1.63	0.54	20	"
Adavi	0.67	0.44	0.46	1.57	0.52	21	"

Source: Field Survey (2017)
LQ1—No of local ind. LQ2—No of manufacturing ind. LQ3—No of people employed.

The findings on the number of people employed in the various industries as presented on the table, shows that nine LGAs have LQs equal to1. This indicates that these LGAs are advantaged in the distribution of this facility. The most advantaged LGAs are Ogori with a mean of 1.94, Idah with a mean of 1.88 and Bassa with a mean of 1.87. Twelve LGAs are disadvantaged because they have LQs below 1, these include among others LGAs like Adavi with a mean of 0.52, Okene with a mean of 0.54 and Ankpa with a mean of 0.69. There is disparity in the distribution of this facility, and the finding in this facility indicates that the facility is highly localized. There is great disparity in the distribution of the facility.

The study also found out that, some LGAs ranked very high than others. The mean of the LQs was calculated, and it allowed the LGAs to be categorized into three main groups of seven LGAs per group according to their level of performance in the ranking. These groups include the upper third with LQ ranging between 1.94 to 1.25, the middle third with LQ ranging between 1.21 to 0.80 and the bottom third with LQ ranging from 0.75 to 0.52; under this socioeconomic variable, the LGAs that performed better and are in the upper third have achieved a reasonable level of performance in the facilities than the other LGAs. The second group which is the middle third includes LGAs that performed averagely like Dekina, Omala and others; the facilities are not well distributed and therefore have more LGAs with mean value that is less than one.

The LGAs in the third CTG are classified as the bottom third; this is because they did not achieve a high level performance in the overall facilities. LGAs in this category include Okehi, Mopamuro and Adavi.The implication of this is that, there will be a high level of unemployment in these LGAs since the facility is about industries.

Without industries the level of development will be very slow. Industries tend to boost the economy of a nation, region or Local government areas. The pattern of distribution of the facility depicted in Figure 4.10 presents the distribution pattern in the study area at a glance.

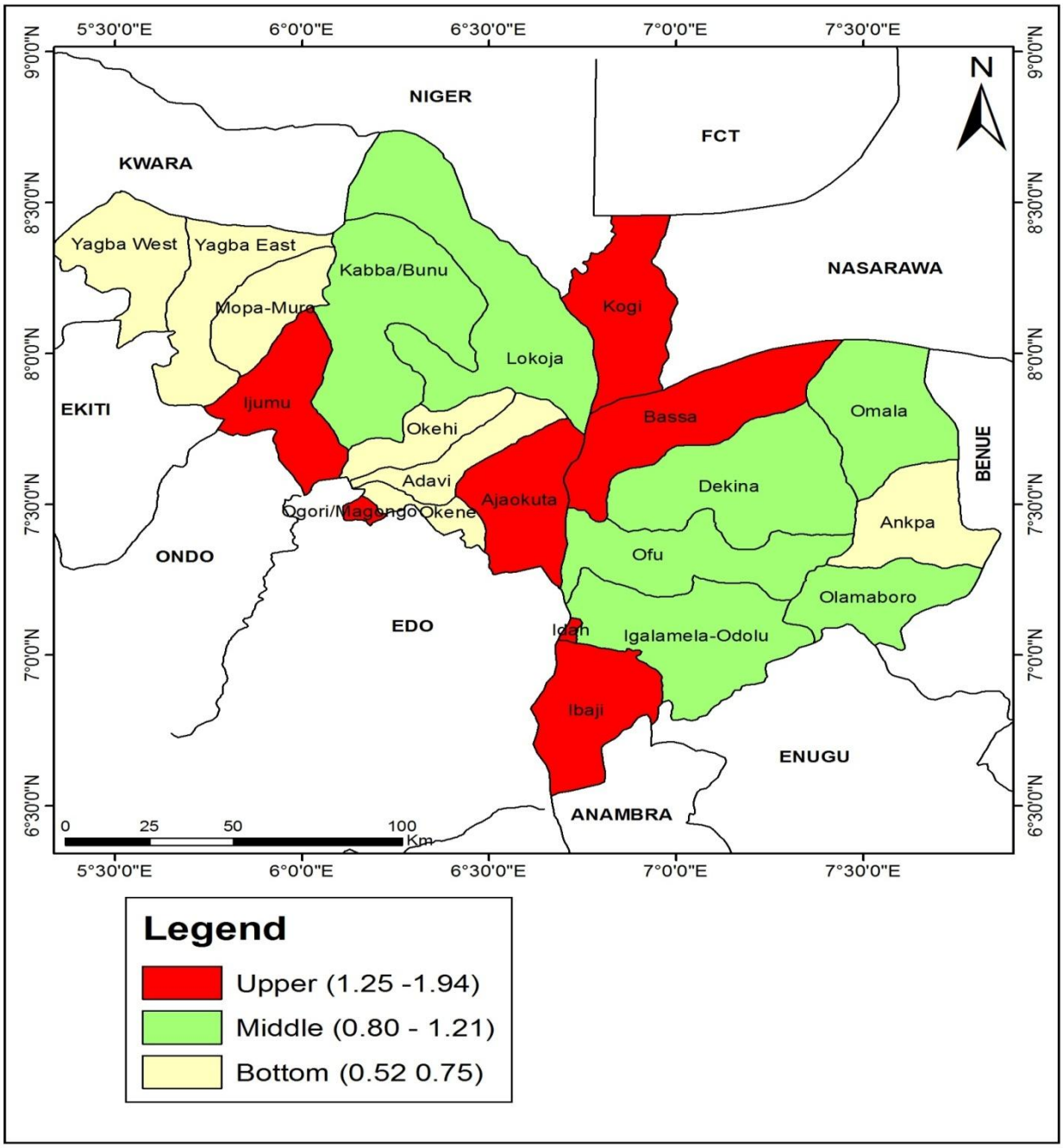


Figure 4. 10: The Pattern Presented by LQ of Industrial Facilities.

Source: Field Survey (2017)

4.3 COMPARATIVE ANALYSIS OF SOCIOECONOMIC DEVELOPMENTIN KOGI STATE

Spatial inequalities of socioeconomic development variables in Kogi State as presented in Table 4.8 and Figure 4.10 shows a clearer picture of the distribution of these facilities. In this combined ranking, the lower the sum of the variables, the better for the LGA. The study reveals disparity in the distribution of facilities among the LGAs showing the leading LGAs to be Idah, Ogori, Bassa, Lokoja, Omala, Igalamela and Olamaboro in the first category. These LGAs appeared at the top of the development ladder in the distribution of the facilities and are advantaged over the remaining LGAs. The seven leading LGAs account for 47.3% of the total score. In the State, there is a significant degree of inequality in levels of development among the LGAs.

This finding is in agreement with earlier studies like those of Tari and Iteimowei (2017) who examined the source of income inequality in Kogi State using wages and salaries. Their study revealed that inequality increases with level of income. Habibu *et al* (2014) also confirmed inequality in education attainment in Nigeria in the study, regional inequality of educational attainment in Nigeria. The study used theil index and decomposition analysis and found out that inequality exists within regions rather than between regions. The study of Hafiz *et al* (2016) also confirmed inequality in the distribution of government secondary schools in Giwa Zone of Kaduna State, Nigeria.

The study using Buffer and overlay analyses revealed that 80% of the secondary schools are concentrated in the northeastern part the area. These studies show that large disparities exist in the economic development dimensions. Some LGAs in Kogi State are either geographically advantaged or disadvantaged as a consequence of uneven impact of nature, trade, government policies and others. There is also an

efficiency gain from the concentration of economic activity in the upper third LGAs than the middle and the bottom LGAs as revealed by the study. The pattern is depicted on Figure 4.11.

Table 4.8: The Aggregate Location Quotient of all the Socioeconomic Variables used

LGA	LQ1	LQ2	LQ3	LQ4	LQ5	Σ	X mean	Rank	Category
Ogori	1.02	1.81	1.80	1.76	1.74	9.1	1.82	1	Upper Third
Idah	2.12	1.46	1.12	1.32	2.03	8.9	1.78	2	“
Bassa	1.54	1.20	1.43	1.65	1.87	7.7	1.63	3	“
Omala	1.62	1.55	1.58	1.57	1.14	7.5	1.54	4	“
Lokoja	1.03	1.85	1.44	1.37	1.11	6.8	1.42	5	“
Ijumu	1.18	1.25	1.07	1.33	1.46	6.3	1.33	6	“
Igalamela	1.09	1.26	1.33	1.39	0.92	6.0	1.23	7	“
Ibaji	1.12	1.42	1.12	1.04	1.29	5.9	1.18	8	Middle Third
Olamaboro	1.05	1.13	1..27	1.44	0.94	5.8	1.16	9	“
Dekina	0.95	1.06	1.08	1.25	1.21	5.6	1.12	10	“
Ajaokuta	1.05	0.88	0.68	0.93	1.35	4.9	0.97	11	“
Kogi	1.27	0.75	0.73	0.83	1.25	4.8	0.96	12	“
Mopa-muro	1.66	0.74	0.75	0.81	0.72	4.7	0.94	13	“
Yagba-west	1.14	0.99	1.06	0.77	0.71	4.6	0.93	14	“
Yagba-East	1.15	0.79	0.90	0.79	0.70	4.3	0.86	15	Bottom Third
Kabba-Bunu	0.68	0.90	0.86	0.75	0.93	4.1	0.82	16	“
Ofu	0.86	0.70	0.67	0.96	0.80	4.0	0.80	17	“
Ankpa	0.72	0.76	0.85	0.61	0.69	3.6	0.72	18	“
Okehi	0.42	0.52	0.72	0.70	0.75	3.1	0.62	19	“
Adavi	0.62	0.58	0.66	0.55	0.52	3.0	0.60	20	“
Okene	0.53	0.60	0.62	0.63	0.54	2.9	0.58	21	“

LQ1 –Transport and Communication, LQ2—Education Facilities, LQ3—Commerce and Trade
LQ4—Health Care Facilities and LQ5—Industrial Facilities
Source: Field Survey (2017)

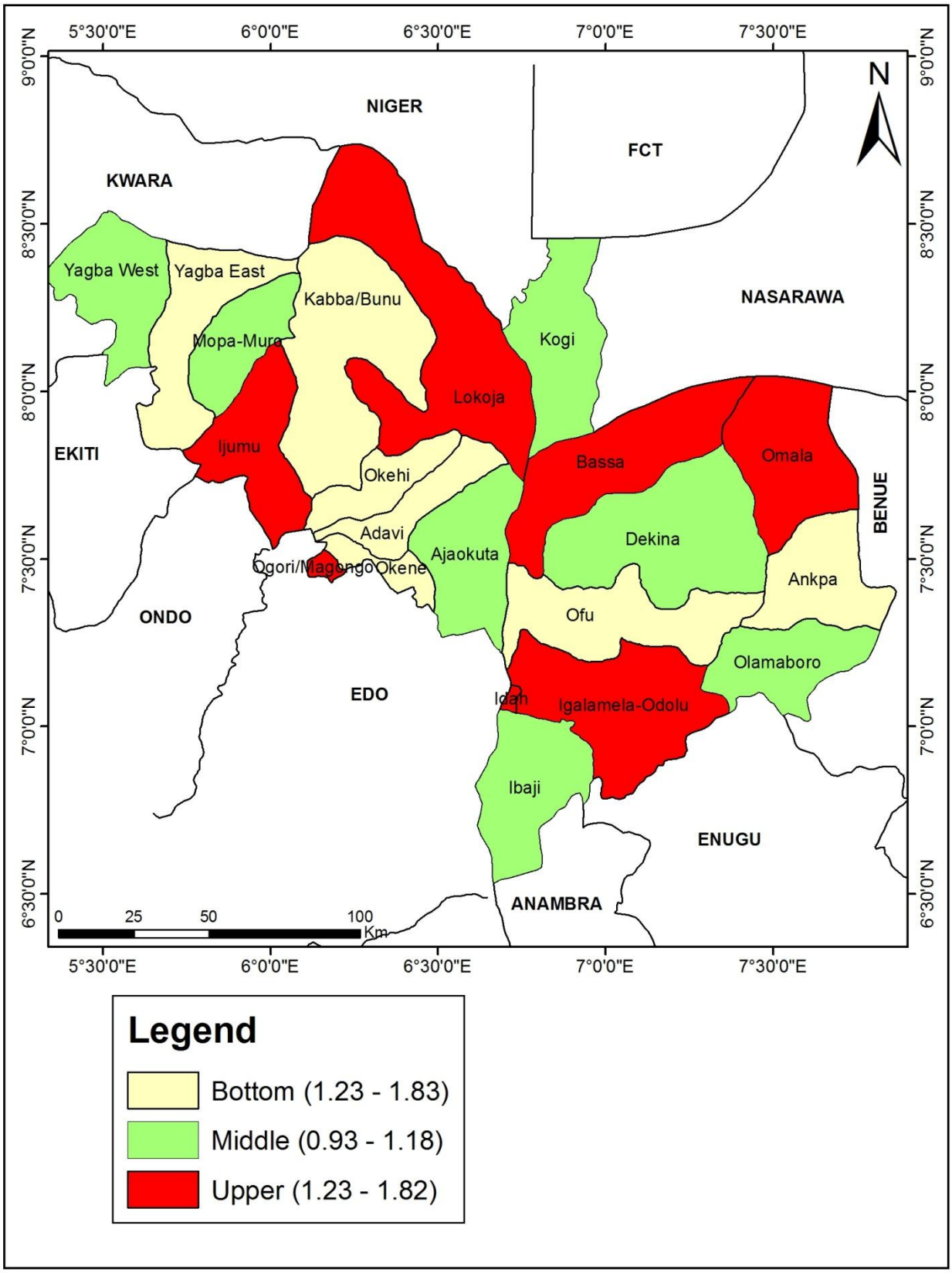


Figure 4. 11: General Pattern of the LQs for the LGAs.

Source: Field Survey (2017).

4.4 SPATIAL PATTERN OF SOCIOECONOMIC DEVELOPMENT

The study examined the pattern of socioeconomic development in the study area. The standardized scores of the entire variable are presented in Tables below. Five major variables selected for the study are; transport and communication, education, commerce and trade, health care and industries as indicators of socioeconomic development. All the variables in this study are treated equally, that is they have a weight of unity as far as the study area is concerned. The data was also subjected to hypothesis testing to know the extent of inequality. The data for the analysis is presented in Appendix II.

4.4.1 Inequalities in Transport and Communication Facilities

This criterion is presented in Table 4.10. It shows the data matrix in respect of standardized score values for the state. It revealed that in kogi state, eight (38.1%) of the local government areas (LGAs) have positive scores and are advantaged and the remaining thirteen (69.1%) are at disadvantaged which is categorized as the middle and the bottom third (column 7). The scores of the LGAs in the advantaged category, which is categorized as the upper third ranged from 1.51 to 0.26 in a descending order. The reasons for this may be due to factors ranging from natural to economic and to political. Some LGAs like Dekina, Ofu, Ankpa, Olamaboro Idah and Bassa performed better than others by reason of the advantage they have as a result of their natural environment, having economic trees that generates other multiplier effects, their population size and some as a result of their influence in politics. In the middle category are LGAs which performed averagely in the socio-economic variable used as indicated on the table.The disadvantaged category is classified as the bottom third which ranges from -1.3 to -4.2. This division is depicted in Figure 4.12. Lokoja which is the State's capital and a Local government headquarter is not the most privileged in this dimension as one will expect. This is so because of the population that has to share

the infrastructures involved this is in agreement with the works of Nengak and Osagbemi (2011) who observed that there is marked concentration of state sector hospitals and key health personnel in the urban areas but people are still under served. Observing the performance of the LGAs in the various facilities under the socioeconomic variable, there are different levels of performances.

Table 4.9: The standardized Scores on Transport and Communication for Kogi State

LGA	Z1	Z2	Z3	Z4	Z5	Σ	×	Rank	Category
Ogori	1.043	1.531	1.978	0.550	0.410	1.55	1.3	1	Upper Third
Idah	0.296	1.734	1.230	-0.793	1.986	1.54	1.1	2	"
Mopa	0.810	1.734	0.090	-1.331	1.244	1.51	0.5	3	"
Omala	-1.246	0.405	0.090	1.625	1.522	1.40	0.9	4	"
Bassa	0.062	0.405	0.971	-0.793	1.337	1.28	0.4	5	"
Kogi	-0.312	-0.127	-0.288	1.222	0.781	1.26	0.3	6	"
Ijumu	-0.779	-0.392	0.845	0.550	0.040	0.20	0.1	7	"
Yagba East	1.558	-0.392	-0.414	-0.122	-0.609	0.02	0.0	8	Middle Third
Yagba West	-0.452	-0.127	0.342	-0.122	0.318	-0.04	0.0	9	"
Ibaji	1.324	-0.127	0.971	-1.465	-0.887	-0.18	0.0	10	"
Olamaboro	1.698	-0.127	-0.665	-0.122	-1.072	-0.29	0.0	11	"
Lokoja	-1.013	-0.127	0.342	-0.122	0.410	-0.51	0.0	12	"
Igalamela	-0.872	-1.189	-0.665	1.894	0.225	-0.61	0.0	13	"
Ajaokuta	-0.405	0.405	-0.288	-0.793	0.318	-0.76	0.0	14	"
Dekina	-0.358	0.405	-0.288	-0.793	-0.331	-1.37	0.0	15	Bottom Third
Ofu	0.016	-0.658	-1.421	1.894	-1.536	-1.71	0.0	16	"
Ankpa	1.231	-1.189	-1.169	-0.122	-0.609	-1.86	0.0	17	"
Kabba/bunu	-2.181	-0.127	0.468	-0.122	-0.238	-2.20	0.0	18	"
Adavi	-0.358	-0.658	-0.917	0.550	-1.072	-2.46	0.0	19	"
Okene	0.249	-1.189	-0.917	-0.793	-1.536	-4.19	0.0	20	"
Okehi	-0.312	-1.189	-1.295	-0.793	-0.702	-4.29	0.0	21	"

Source: Field Survey (2017)

Z1--Length of road, Z2--No of post offices, Z3--Global comm. Masts, Z4--% of People using mobile phones, Z5--% of people using TV sets.

Some LGAs performed better in one or two facilities while some did not. As reflected in Figure 4.12, the study showed clearly the varying degrees of the distribution of the indicators of socioeconomic development in the study area. The study discovered that, some LGAs that ranked low in having some of these facilities still enjoy varying

degrees of privileges, while those that ranked high also have areas in which they performed low. It all translates to inequality in the distribution of socioeconomic infrastructures.

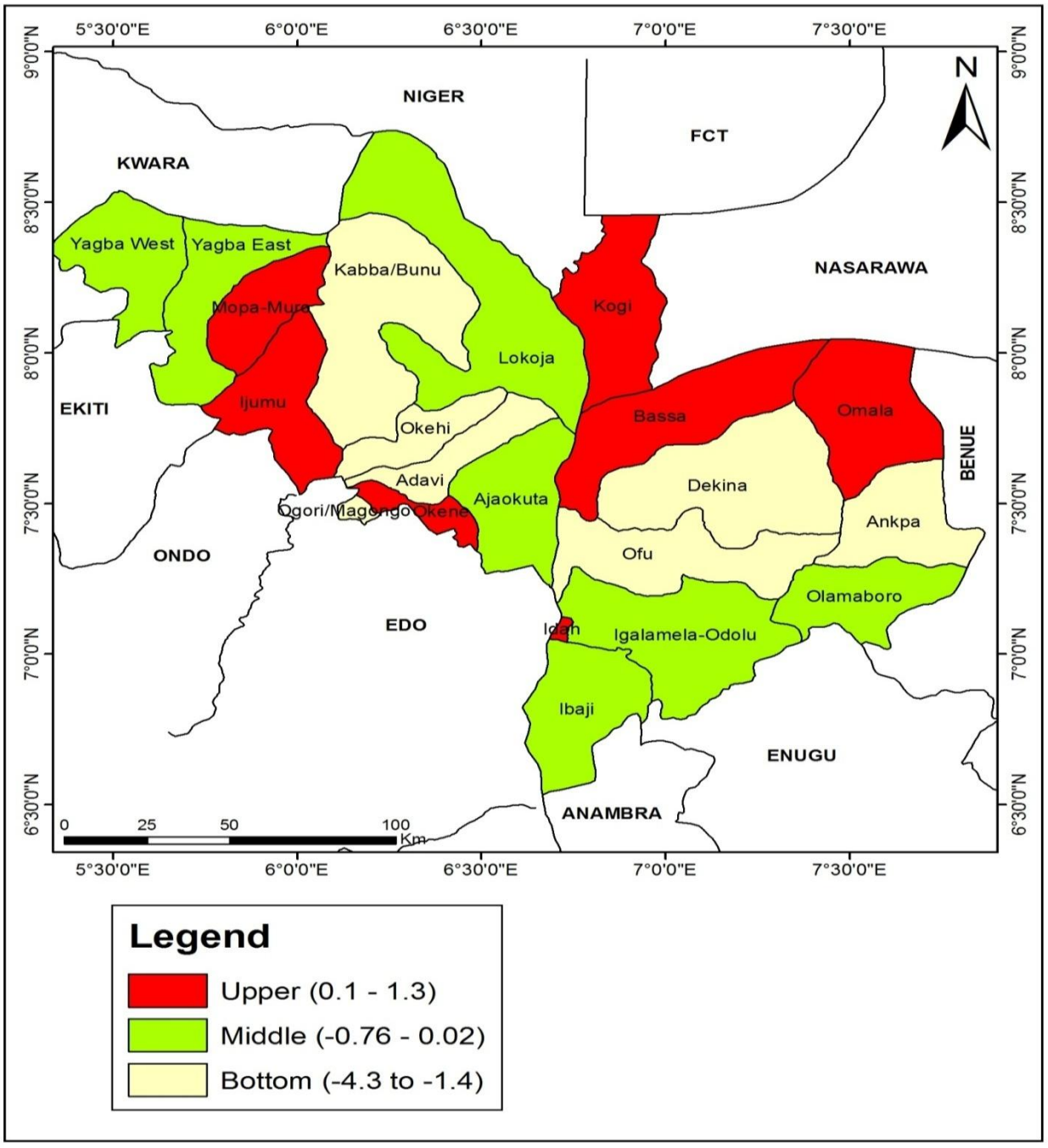


Figure 4. 12:**The performance of the LGAs in Trans and Communication Facility.**

Source: Field Survey, 2017.

4.4.2 Hypothesis Testing

To test the null hypothesis which states that there is no significant difference in the distribution of transport and communication variable in Kogi State, a One-Way Analysis of Variance (ANOVA) was used at 5% level of significance.

ANOVA

Table 4.10: Transport and Communication Dimension

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	12.311	11	1.119	3.018	.001
Within Groups	137.949	372	.371		
Total	150.260	383			

Level of Significance 0.05
Source: Author's Computations (2017)

The P-value of the analysis of variance (0.001) is less than 0.05 therefore; we reject the null hypothesis and conclude that there is a significance difference in the distribution of transport and communications facilities in the study area.

4.4.3 Inequalities in Educational Facilities

The standardized scores of educational facilities and the pattern of performance in Z-Scores by LGAs under this criterion are presented in Table 4.11. The Table has nine columns with the various variables. In terms of educational facilities, the table shows that ten (35%) LGAs were advantaged with Idah and Lokoja recording the highest score value of (1.797 and 1.314) respectively. The reason for this high value in the two LGAs may be because of the fact that Lokoja is the administrative headquarters of the state researched and also the first administrative Capital of Nigeria which makes it to have different categories of institutions. There are many private schools and governments schools to cater for the increasing population. Idah on the other hand is highly favoured in terms of political dispensation, a good number of educational institutions, both the higher and the lower cadre. These privileged LGAs and some

other five are categorized as the upper third as the 21 LGAs are categorized into three levels of development. These LGAs attained a high level of performance in the facilities.

Table 4.11: The Standardized Scores On Educational Facilities

LGA	Z6	Z7	Z8	Z9	Z10	Z11	Σ	Rank/Category
Idah	1.783	1.783	1.503	1.529	1.758	1.591	1.751	1 Upper
Lokoja	1.783	1.254	1.633	1.760	1.009	0.875	1.726	2 Third
Ogori	1.523	-0.211	1.437	-0.110	0.000	-0.201	1.690	3 "
Omala	0.035	1.312	0.784	1.039	-0.740	1.112	1.556	4 "
Ibaji	-0.151	1.312	1.111	0.782	-0.740	1.312	1.542	5 "
Igalamela	-0.708	0.007	-0.523	0.232	0.135	0.007	1.418	6 "
Ijumu	0.333	-0.211	0.261	0.086	0.135	-0.311	0.314	7 "
Bassa	-0.002	-0.211	0.457	0.269	0.135	0.211	0.241	8 Middle
Olamaboro	-0.708	1.366	-1.176	0.721	0.000	1.366	0.153	9 Third
Dekina	1.634	-1.044	-0.457	-0.843	0.000	-0.044	0.120	10 "
Yagba-West	-0.113	-0.319	-0.849	0.134	0.134	-0.319	-0.693	11 "
Kabba/bunu	0.407	-0.319	1.764	-0.648	-0.740	-0.319	-0.145	12 "
Ajaokuta	0.221	-0.120	-0.131	0.073	0.135	-0.120	-0.058	13 "
Yagba-East	-0.894	-0.156	-0.653	0.415	0.000	-0.156	-1.444	14 "
Ankpa	0.593	-0.392	-0.849	-0.159	-0.740	-0.392	-0.753	15 Bottom
Kogi	-1.080	-0.247	-0.653	-0.745	0.000	-0.247	-2.972	16 Third
Mopa-muro	-0.597	-0.736	-0.065	-0.965	-0.740	-0.736	-4.436	17 "
Ofu	-0.485	-0.809	-0.392	-1.014	-0.740	-0.809	-4.734	18 "
Okene	-1.154	-1.062	-1.176	-1.014	0.000	-1.062	-5.622	19 "
Adavi	-0.969	-1.171	-0.980	-1.381	0.000	-1.171	-5.470	20 "
Okehi	-1.452	-1.026	-1.045	-1.161	0.000	-1.026	-7.162	21 "

Source: Field Survey (2017)

KEY: Z6= number of primary schools Z7= number of teachers in primary schools Z8=Number of secondary Schools Z9=Number of teachers in secondary schools Z10=Number of tertiary institutions Z11= ratio of secondary school teachers to students.

The LGAs in the middle category did not have an equitable level distribution in the facilities and it accounted for about 25% of the LGAs.The disadvantaged Local Government Areas under this criterion accounted for about 40% of which the most disadvantaged LGA has a composite score of -7.162. These LGAs are categorized as the bottom third according to their level of performance. The pattern produced is depicted on Figure 4.13.

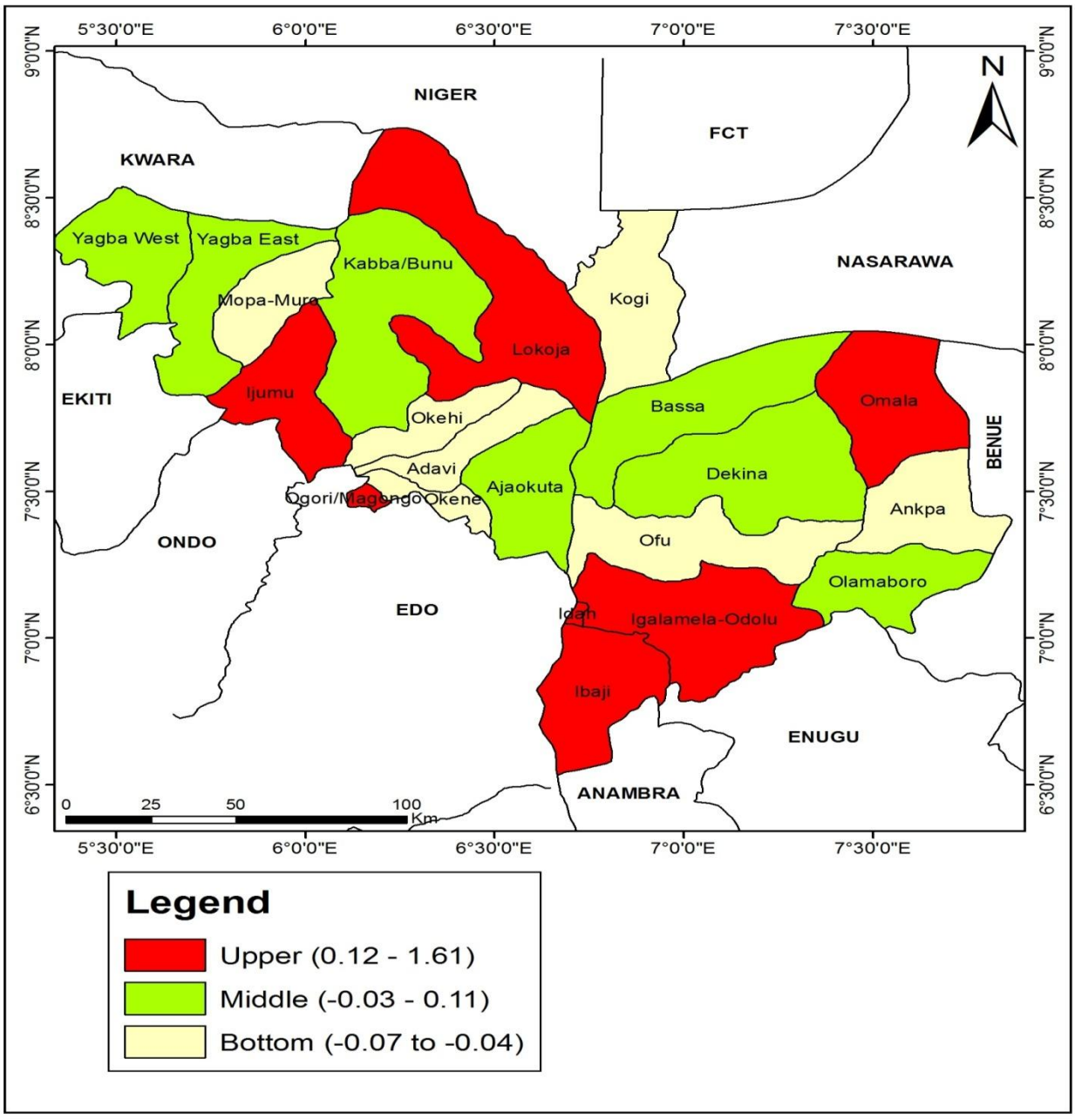


Figure 4. 13: The performance of the LGAs in Educational Facility

Source: Field Survey (2017)

4.4.4 Hypothesis Testing

To test the null hypothesis which states that there is no significant difference in the distribution of Education facilities in Kogi State, a One-Way Analysis of Variance (ANOVA) was used at 5% level of significance.

ANOVA

Table 4.12: Education Dimension

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	24.016	11	2.183	5.044	.000
Within Groups	161.016	372	.433		
Total	185.032	383			

Level of Significance 0.05
Source: Author's Computations

The p-value of the analysis of variance (0.000) is less than 0.05 therefore we reject the null hypothesis and conclude that there is a significant difference in the distribution of educational facilities in the study area.

4.4.5 Inequalities in Commerce and Trade facilities

The standardized scores on commerce and trade are presented in Table 4.13 and appendix 11 where the raw scores are presented. The table has seven columns with the different variables. The study discovered that seven LGAs top the ladder as they performed well in the distribution of the facilities. The study also discovered that in the facility Z12, 57.2% of the LGAs were discovered to be deficient in the facilities except for Ogori, Idah, Omala, Lokoja, Bassa, Igalamela and Olamaboro with. These seven LGAs are categorized as the upper third as a result of their performance.The most deficient are Adavi and Okene in the distribution of banking facility which is presented column Z13, and the most advantaged are Ogori and Idah. The reason for this could not be readily explained.

Table 4.13: The Standardized Scores on Commerce and Trade facilities.

LGA	Z12	Z13	Z14	Z15	Σ	Rank	Category
Ogori	1.904	1.595	1.024	1.904	1.43	1	Upper Third
Idah	1.277	0.992	0.702	1.277	1.25	2	"
Omala	0.380	1.794	1.646	-0.786	1.44	3	"
Lokoja	0.559	0.458	1.080	0.559	1.66	4	"
Bassa	1.277	0.191	0.135	1.277	1.88	5	"
Igalamela	1.456	0.458	-0.432	1.356	1.89	6	"
Olamaboro	1.277	-0.611	0.702	1.277	1.65	7	"
Ibaji	-0.780	0.458	0.135	0.380	1.35	8	Middle Third
Dekina	-0.158	0.458	0.324	-0.158	0.47	9	"
Ijumu	-0.517	0.191	0.702	-0.517	-0.14	10	"
Yagba west	0.111	-0.076	0.324	0.111	-0.47	11	"
Yagba east	-0.517	0.458	-0.054	-0.517	-0.40	12	"
Kabba-bunu	-0.786	-0.076	0.135	-0.786	-0.73	13	"
Ankpa	-0.248	-0.878	0.324	-0.248	-0.80	14	"
Mopa-muro	0.559	-0.611	-0.810	0.559	-0.86	15	Bottom Third
Kogi	-0.158	-0.343	-0.621	-0.158	-1.12	16	"
Okehi	-0.696	-0.611	-0.432	-0.696	-1.74	17	"
Ajaokuta	-1.413	-1.145	-1.188	-1.413	-3.75	18	"
Ofu	-1.055	-1.145	-1.565	-1.055	-3.77	19	"
Adavi	-1.055	-1.412	-1.565	-1.055	-4.03	20	"
Okene	-1.413	-1.145	-1.565	-1.413	-4.12	21	"

Source: Field Survey (2017)

Z12 number of markets, Z13 number of banks, Z14 number of Cooperative Society, Z15 number of community development organization

The second category which is the middle category includes; Ibaji, Dekina, Ijumu, Yagba-west, Yagba-east, Kabba-bunu and Ankpa. In the third category classified as the bottom third are Mopa-muro, kogi, Okehi, Ajaokuta, Ofu, Adavi and Okene LGAs. Education facility is not equally distributed in the state. Some LGAs are privileged over the others. Fig 4.14 shows the pattern depicted by the facility at a glance in the LGAs.

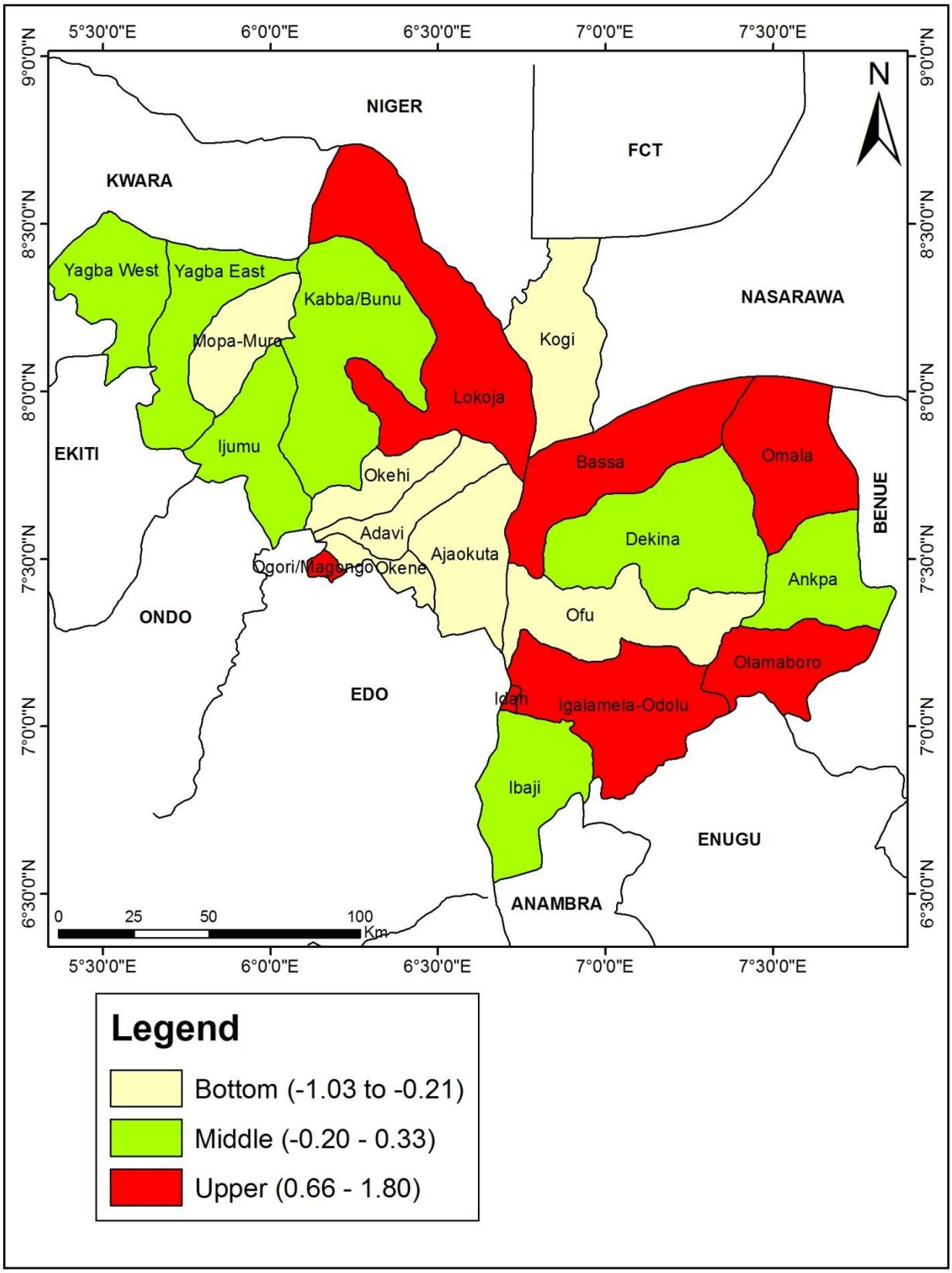


Figure 4. 14:Pattern of socioeconomic Development of Commerce and Trade in Kogi State

Source: Field survey, (2017)

The study discovered that even in the previous analytical technique that is the location quotient (LQ), LG such as Ogori, Idah and Omala has maintained the status quo of enjoying more privileges in the distribution of a number of community development infrastructures. The reason for this may be because of their relatively low population.

4.4.6 Hypothesis Testing

To test the null hypothesis which states that there is no significant difference in the distribution of Commerce and Trade variable in Kogi State, a One-Way Analysis of Variance (ANOVA) was used at 5% level of significance.

ANOVA

Table 4.14: Commerce and Trade Dimension

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.699	11	.154	1.452	.161
Within Groups	11.487	108	.106		
Total	13.185	119			

Level of Significance 0.05
Source: Author's Computations

The p-value of the analysis of variance (0.161) is greater than 0.05 therefore, the null hypothesis is sustained and concluded that there is no significant difference in the distribution commerce and trade facility in the study area.

4.4.7 Inequality in Health Care Facilities Distribution

The standardized scores on health care facilities are presented in Table 4.15. The table has eight columns with the variables. From the table it can be seen that Adavi and Ankpa are the most disadvantaged with scores of -6.86 and -4.57 respectively. In the analysis, it showed that even though the disadvantaged LGAs ranked low, they still enjoy varying degree of privileges in the health care facilities and those that ranked high also have areas in which they performed low. Example is Ajaokuta which performed averagely well in Z19 but failed in the others. Lokoja LGA performed well

in Z16 and Z17, but did not perform well in Z18, Z19 and Z20 but ranked 7th in the overall performance when computed.

Table 4.15: The Standardized Scores on Healthcare Facilities

LGA	Z16	Z17	Z18	Z19	Z20	Σ	Rank	Category
Idah	1.960	1.108	1.424	1.784	1.306	1.69	1	Upper Third
Ogori	0.111	0.405	1.894	1.222	1.678	1.66	2	"
Bassa	1.519	1.722	1.363	-0.188	0.209	1.63	3	"
Omala	1.355	0.054	0.833	0.689	0.758	1.58	4	"
Olamaboro	0.799	0.352	0.833	0.470	0.209	1.31	5	"
Igalamela	-0.053	-0.157	0.303	0.689	1.306	1.30	6	"
Lokoja	0.962	1.476	-0.227	-0.845	-0.065	1.09	7	"
Dekina	-0.151	-0.280	-0.227	0.908	0.758	1.01	8	Middle Third
Ijumu	-0.086	1.037	-0.227	-0.407	-0.065	0.25	9	"
Ibaji	-0.512	-0.649	0.303	0.031	0.758	-0.07	10	"
Ofu	-0.806	-0.561	0.303	0.031	0.209	-0.82	11	"
Ajaokuta	-0.315	-0.421	-0.757	0.689	-0.065	-0.87	12	"
Kogi	-0.217	0.071	-0.227	0.031	-1.163	-1.51	13	"
Mopa	-0.381	-0.017	-0.757	0.031	-0.614	-1.74	14	"
Yagba-East	-0.774	-0.034	-0.757	0.031	-1.163	-2.70	15	Bottom Third
Yagba-West	-0.544	0.247	-0.757	-0.845	-0.888	-2.79	16	"
Kabba-bunu	-0.446	-1.439	-0.757	-0.188	-0.614	-3.44	17	"
Okehi	-0.839	-1.264	-0.227	-0.407	-0.888	-3.63	18	"
Okene	-0.512	-0.122	-1.288	-1.722	-0.888	-4.53	19	"
Ankpa	-0.839	-0.526	-0.757	-1.283	-1.163	-4.57	20	"
Adavi	-1.232	-2.001	-1.288	-1.722	-0.614	-6.86	21	"

Source: Field Survey (2017)

Z16 number of medical centers, Z17--Number of hospital beds, Z18--Number of medical doctors, Z19--Number of nurses and mid-wives and Z20-- number of pharmacists.

The study also discovered that in the distribution of healthcare facilities, only nine (42.9%) LGAs were advantaged. The most advantaged are Idah Ogori, Bassa and Omala. Others include Olamaboro, Igalamela, Lokoja, Dekina and Ijumu. A critical look at the analysis shows that, only four LGAs performed well in the facilities throughout (Z16 to Z10) of the socio-economic variable. The LGAs are Idah, Ogori, Omal and Olamaboro. Bassa LGA has negative score in facility Z19 which made it

fallout from the best performed. Some LGAs performed well in two facilities but poor in the other three facilities, since only five facilities were observed under this category. Example is Dekina LGA; the LGA achieved positive score in Z19 and Z20 facilities and negative scores in three facilities Z16, Z17 and Z18. But performed well when related with the number of people served by the facility and ranked, the LGA ranked among the middle group with 8th position. Ibaji LGA also performed well in three facilities with negative score in two facilities but ranked 10th when computed and related to the number of people served. Some LGAs also performed very poor in all the facilities under this socioeconomic variable recording negative scores. Under this category the LGAs include; Kabba-bunu, Okehi, Okene, Ankpa and Adavi. This is contrary to observation and what is obtained on ground. In some of these LGAs, there are more facilities but when related to the number of people served, the spatial pattern of distribution becomes different; Figure 4.15 depicts it at a glance.

4.4.8 Hypothesis Testing

To test the null hypothesis which states that there is no significant difference in the distribution of healthcare facilities in Kogi State, a One-Way Analysis of Variance (ANOVA) was used at 5% level of significance.

ANOVA

Table 4.16: Healthcare Dimension

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	14.369	.11	1.306	6.474	.000
Within Groups	75.062	372	.202		
Total	89.431	383			

Level of Significance 0.05
Source: Author's Computations

The p-value of the analysis of variance (0.000) is less than 0.05 therefore; we reject the null hypothesis and conclude that there is a significant difference in the distribution of Healthcare facilities in the study area.

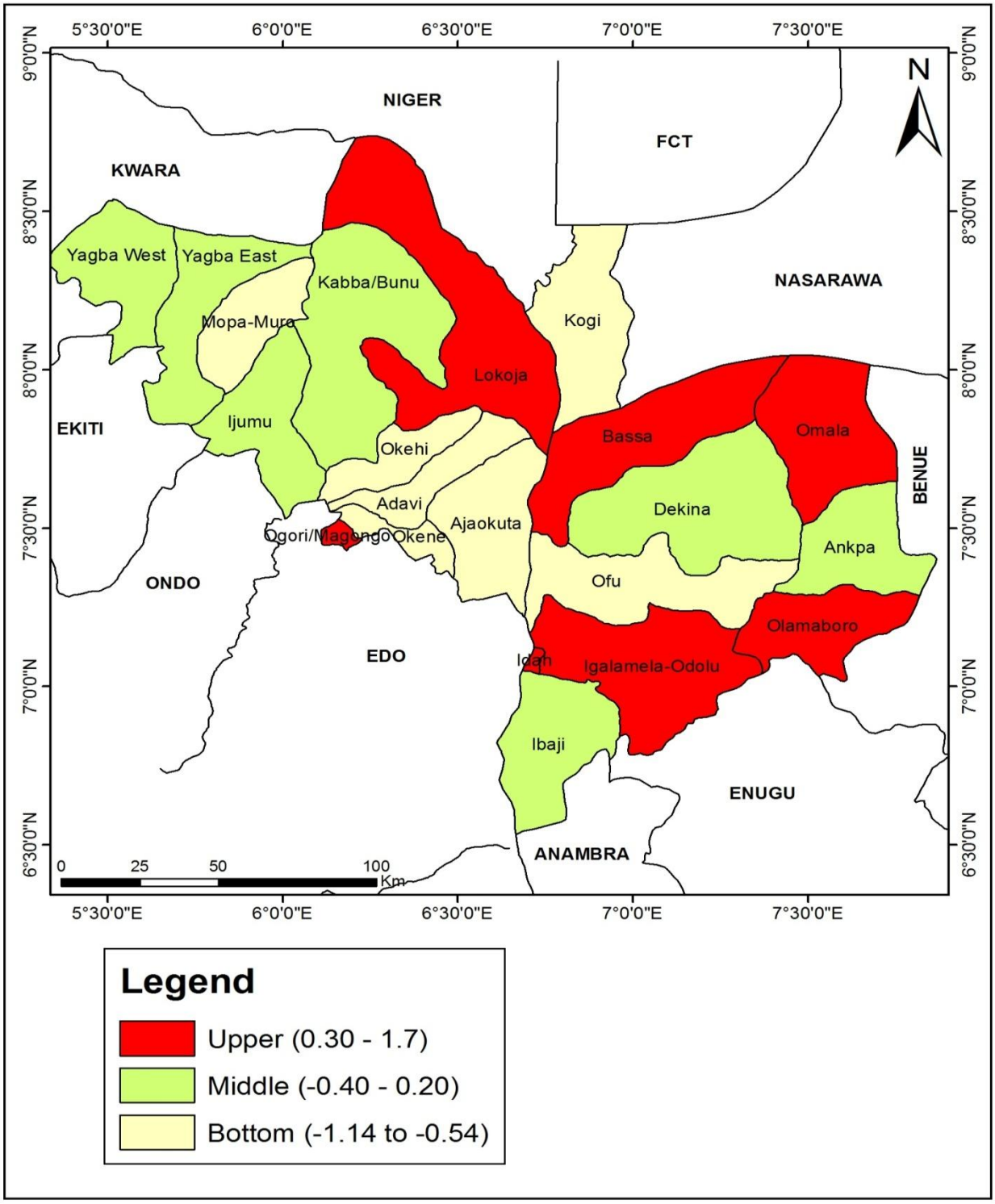


Figure 4. 15: Pattern of Socioeconomic Development of Healthcare Facility in Kogi State
Source: Field Survey, (2017)

4.4.9 Inequalities in Industrial Facilities Distribution

The standardized scores on industrial facilities are presented in Table 4.17 the table has six columns with the variables.

Table 4.17: The Standardized Scores on Industrial Facilities

LGA	Z21	Z22	Z23	Σ	Rank	Category
Ogori	1.597	1.563	1.875	1.04	1	Upper Third
Idah	0.659	1.563	1.891	1.11	2	"
Bassa	1.213	0.987	1.621	1.82	3	"
Ijumu	1.490	0.411	1.591	1.79	4	"
Ajaokuta	1.213	0.411	1.321	1.95	5	"
Ibaji	-0.171	1.275	0.708	1.81	6	"
Kogi	-0.171	0.987	0.985	1.80	7	"
Dekina	0.105	0.699	0.990	1.79	8	Middle Third
Omala	0.659	-0.165	1.256	1.74	9	"
Lokoja	0.105	0.123	1.502	1.73	10	"
Olamaboro	-0.171	0.123	1.589	1.54	11	"
Kabba-bunu	-0.725	0.411	0.915	0.60	12	"
Igalamela	-0.448	-0.165	0.272	0.89	13	"
Ofu	-0.171	-0.453	0.875	0.88	14	"
Okehi	-0.725	-0.453	-1.223	-0.05	15	Bottom Third
Mopa	-0.448	-0.741	-1.524	-0.34	16	"
Ankpa	-0.448	-1.029	-1.121	-0.36	17	"
Yagba-East	-1.002	-0.741	-1.513	-0.23	18	"
Yagba-West	-1.002	-1.605	-2.406	-0.20	19	"
Okene	-1.556	-1.317	-2.651	-0.22	20	"
Adavi	-1.002	-1.893	-2.772	-0.10	21	"

Source: Field Survey (2017)

Z21 number of local craft industries, Z22 number of manufacturing industries and Z23 number of people employed in the industries.

The study revealed the performance of each of the local government area in industrial facilities in the state. In the first facility under Z21 which is the number of local craft industries, five local government areas performed well and ranked between 1^{st} and 5^{th}. Some local government that performed very well and classified under the upper category, the LGAs include Ogori, Idah, Bassa, Ijumu and Ajaokuta. Dekina, Omala and Lokoja falls in the middle category having positive scores of 0.105, 0.659 and 0.105 respectively. The LGAs that have negative scores which did not to perform well

are Ibaji, Kogi, Olamaboro, Kabba, Igalamela, Ofu, Okehi, Mopa, Ankpa, Yagba East, Yagba West, Okene and Adavi.Eleven LGAs performed averagely well with positive scores. These LGAs includes Ogori, Lokoja, Olamaboro and Kabba. Ogori, idah and Ibaji performed higher than other LGAs. They have positive score of 1+. The 3rd facility is the percentage of people employed in the industries. Z23 is the column reflecting the standardized scores (Z score). Fourteen local government areas performed excellently well with high scores. Seven LGAs performed below unity. These LGAs include Okehi, Mopa, Ankpa, Yagba - East, Yagba - West, Okene and Adavi. The pattern exhibited by the facility is depicted in Figure 4.16 presenting the pattern at a glance.

4.4.10 Hypothesis Testing

To test the null hypothesis which states that there is no significant difference in the distribution of Industrial facilities in Kogi State, a One-Way Analysis of Variance (ANOVA) was used at 5% level of significance.

ANOVA

Table 4.18: Industry Dimension

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.699	11	.154	1.452	.161
Within Groups	11.487	108	.106		
Total	13.185	119			

Level of Significance 0.05
Source: Author's Computations

The p-value of the analysis of variance (0.161) is greater than 0.05 therefore, the null hypothesis is sustained and concluded that there is no significant difference in the distribution of industrial facility in the study area.

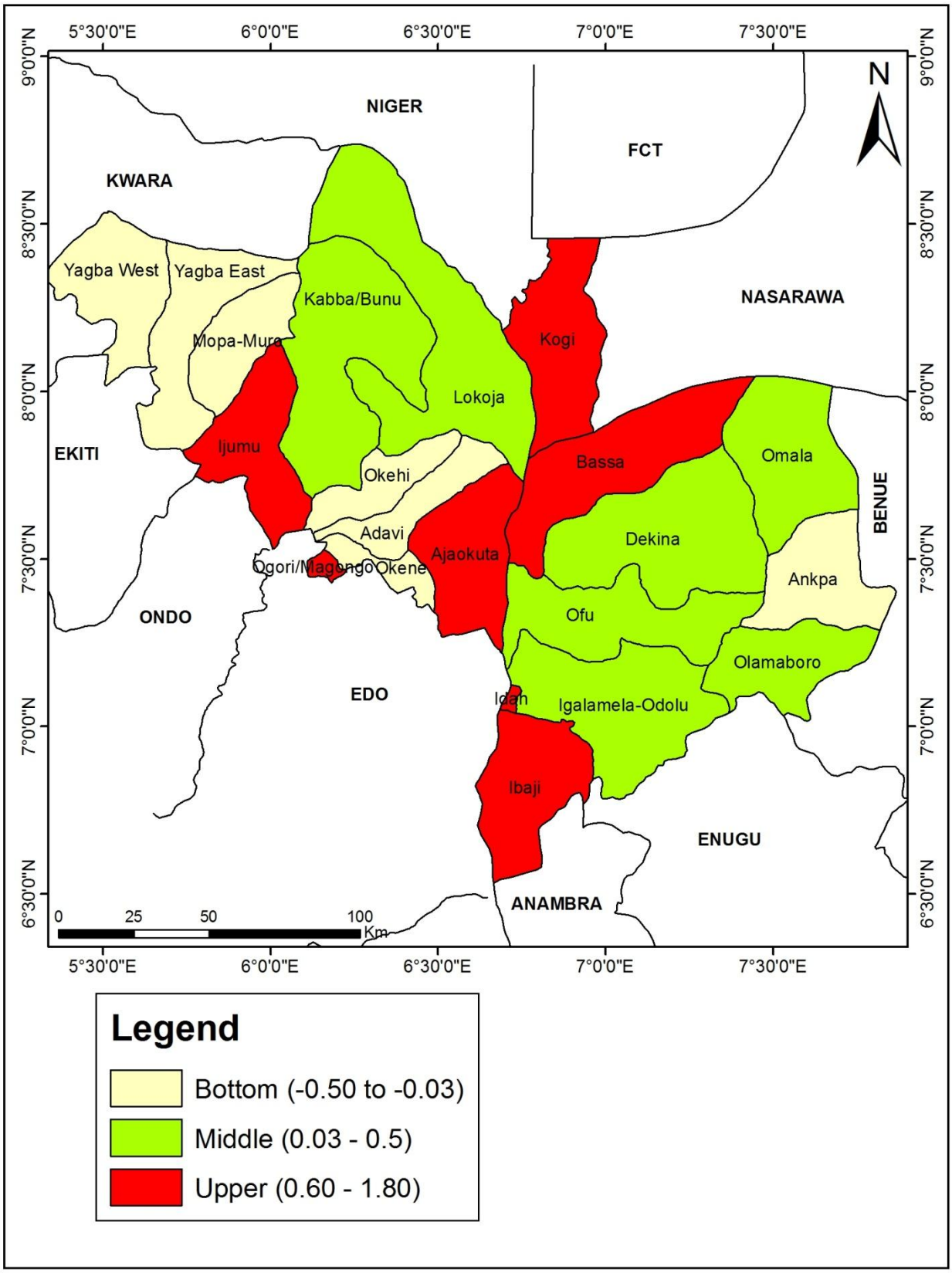


Figure 4. 16: **Pattern of Socioeconomic Development of Industrial Facilities**

Source: Survey (2017)

4.4.11 Comparative Analysis of the Standardized Scores on the Five Dimensions

The combined standardized scores of all the variables analyzed are presented on Table 4.19. A critical look at the scores shows the spatial nature of the distribution of the facilities across board. It shows an uneven distribution of the facilities. This is in line with the study of Ita *et al* (2012) on the spatial inequalities in development among geographic units in Cross River state but with a difference. The result of Ita *et al* showed that urban based LGAs consistently remain at the top of the development ladder, while the rural based LGAs are at the bottom of the ladder, thus demarcating the inequality problem in the state along rural-urban dichotomy.

In this study, it was discovered that there are some degree of variation in the pattern of distribution of the socio-economic facilities. Looking at the combined facilities for each LGA in the state, it showed that Idah, Ogori, Bassa, Lokoja, Omala, Igalamela and Olamaboro have a fair share of the facilities. Some of these Local government areas are not urban based but appeared at the top of the ladder as the LGAs having more of the socioeconomic variables.While some LGAs are urban based but have negative scores and are thus deprived of equal share of the facilities. It also agrees and at the same time disagrees with the findings of Oyekanmi *etal* (2011) in the study of healthcare facilities in Kogi state along senatorial districts. Oyekanmi *etal* found out that, there exist inequalities in the distribution of HCF facilities along the senatorial districts in the state. This present study found out, that of a truth, there exist inequalities in the distribution of facilities but not along senatorial districts in the state.

Table 4.19: Comparative Analysis of Z-Score for Socioeconomic Development Indicators in Kogi State

LGA	Transport Facility	Education Facility	Commer &Trade	HealthCare Facility	Industrial Facility	Sum of Z Score	Mean	Rank	CTG
Idah	1.51	1.54	1.43	1.31	1.04	1.83	1.9	1	Upper Third
Ogori	1.54	1.80	1.25	1.52	1.11	1.28	1.5	2	"
Bassa	1.98	1.75	1.88	1.63	1.82	1.06	1.5	3	"
Lokoja	-0.51	1.31	1.66	1.30	1.73	1.50	1.4	4	"
Omala	-2.40	-3.56	1.44	1.69	1.74	1.71	1.4	5	"
Igalamela	-0.61	0.69	1.84	1.09	0.89	1.90	1.2	6	"
Olamaboro	-0.29	-0.69	1.65	1.66	1.54	1.87	1.2	7	"
Ibaji	-0.18	1.56	1.36	-0.07	2.95	5.60	1.12	8	Middle Third
Ijumu	0.26	0.15	-0.14	0.25	1.80	1.32	0.86	9	"
Dekina	-1.37	0.73	0.47	1.01	1.80	1.63	0.53	10	"
Mopa-muro	2.55	2.98	-0.86	-1.74	-0.34	1.59	0.52	11	"
Kogi	1.28	0.75	-1.12	-1.50	1.80	1.20	0.24	12	"
Ajaokuta	-0.76	0.08	-3.75	-0.87	3.79	-1.51	-0.25	13	"
Yagba-Wast	-0.04	-0.15	-0.47	-2.79	-0.20	-3.64	-0.73	14	"
Yagba-East	-1.71	4.73	-3.77	-0.82	0.88	-0.69	-0.14	15	Bottom Third
Okehi	-4.29	-5.62	-1.73	-3.62	-0.05	-4.08	-0.82	16	"
Kabba/Bunu	0.02	-1.44	-0.40	-2.70	-0.23	-4.75	-0.95	17	"
okene	-2.20	0.06	-0.73	-3.44	0.60	-5.71	-1.14	18	"
Ankpa	-4.17	5.71	-4.12	-4.53	-0.22	-7.35	-1.47	19	"
Adavi	-1.86	-4.43	-0.80	-4.57	-0.36	-12.02	-2.40	20	"
Ofu	-2.46	-5.64	-4.12	-6.86	-0.10	-19.18	-3.84	21	"

Source: Field Survey (2017)

The LGAs below the ladder are Ofu, Adavi, Ankpa, Okene and Kabba- bunu LGAs which does not belong to the same senatorial district. Idah, Lokoja and Ogori are not in the same district, yet they fall in the same category in the upper third, meaning that the distribution of facilities using this method cut across settlements rather than senatorial districts. The pattern is depicted in Figure 4.17.

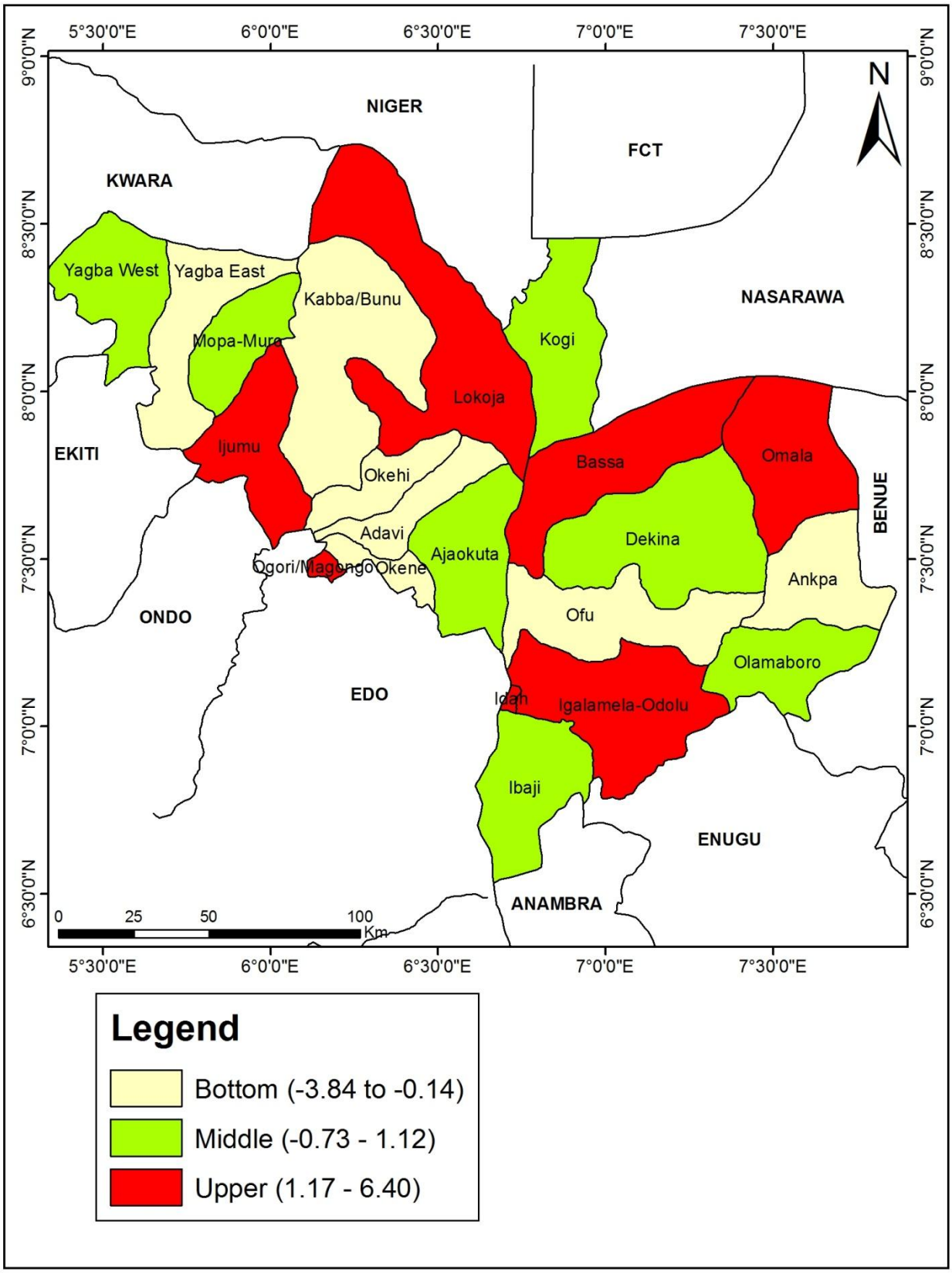


Figure 4. 17: The Pattern Depicted by the Mean of all the Facilities Used.

Source: Field Survey(2017)

4.5 THE PROCESSES UNDERLYING THE SPATIAL PATTERNOF SOCIOECONOMIC DEVELOPMENT IN KOGI STATE

4.5.1 The Factors influencing the Spatial Dimension of Socioeconomic Development

The study examined the processes that are responsible for the spatial pattern of socio-economic development in Kogi State by subjecting the data to factor analysis. However, as a precondition to factor analysis is the relationship between the socioeconomic variables used in this study. In determining the degree of association between these socioeconomic development indicators, appendix iii shows the correlation matrix of the twenty-three indicators considered in this study. These include; X1 (lengths of road), X2 (number of post offices), X3 (number of global communication masts), X4 (people using mobile phones), X5 (people using radio/television gadgets), X6 (number of primary schools), X7 (number of teachers in the primary schools), X8 (number of secondary schools), X9(number of teachers in secondary schools), X10 (number of tertiary institutions), X11 (secondary school student-teachers ratio), X12 (number of markets), X13 (number of banks), X14 (number of cooperative societies), X15 (Number of community development organization), X16 (Number of health care centres), X17 (number of hospital beds), X18 (number of medical doctors), X19 (number of nurses/midwives), X20(number of pharmacists), X21 (number of local craft industries), X22 (number of manufacturing industries)and X23 (% of people employed in the industries). The relationship between these socioeconomic development indicators is a precondition for factor analysis that is used in this work.

4.5.2 Rotated Matrix of Factors Influencing Pattern of Socioeconomic Development

The rotated matrix in respect of the variables influencing the spatial pattern of socioeconomic development in Kogi State after correlation is presented in Table 4.20. The results of the factor analysis (Varimax rotated) reduced the 23 independent variables to seven factors of socioeconomic development, this is also presented on Table 4.21 with a cumulative percentage variance of 63.5%, thus leaving 36.5% of the total variance unexplained. The unexplained variances are the socio-economic variables not captured in this research work.

Factor I has significant loadings on 10 variables, namely X4 (number of people using mobile phones), X5 (number of people using radio/television gadgets), X6 (number of primary schools), X7 (number of people teachers in the primary school), X9 (number of teachers in secondary schools), X10 (number of tertiary institutions), X11(secondary school students-teachers ratio), X12 (number of markets), X15 (Number of banks), X16 (Number of health care centres).These variables accounts for 39.1% of the total variance.

Factor II has significant loadings on 2 variables with an eigenvalue of 2.97 and explains 11.0% of the total variance. The variables are X1 (Length of major access roads), X2 (Number of Post Offices), The underlying factor is therefore labeled transport and Communication.

Factor III has a significant loading on 3 variables, namely X17 (number of hospital beds), X18 (number of medical doctors) and X19 (number of nurses/midwives). It explains 6.2% of the total variance, and has an eigenvalue of 1.68. Consequently, the factor is described as medical infrastructural facilities.

Table 4.20: Matrix of Factors Influencing Socioeconomic Development in Kogi State (Varimax Rotated)

Variable	Factor I	Factor II	Factor III	Factor IV	Factor V	Factor VI	Factor VII
X_1	0.071	0.676*	0.145	0.168	0.094	0.123	0.252
X_2	0.233	0.610*	0.203	0.198	0.159	0.246	0.326
X_3	0.014	0.248	0.457	0.093	0.032	0.361	0.223
X_4	0.803*	0.234	0.083	-0.155	0.132	0.110	-0.041
X_5	0.796*	0.198	0.065	-0.117	0.299	0.038	-0.073
X_6	0.670*	0.240	0.114	0.038	0.238	-0.011	0.117
X_7	0.539*	0.142	0.153	0.016	0.226	0.017	0.399
X_8	0.403	0.242	0.240	-0.005	0.113	-0.004	0.550*
X_9	0.696*	-0.014	-0.176	0.081	0.180	0.069	0.245
X_{10}	0.735*	0.084	-0.120	0.075	0.135	0.132	0.089
X_{11}	0.739*	0.036	0.156	0.206	0.165	0.251	-0.051
X_{12}	0.564*	-0.021	0.142	0.084	0.147	0.316	-0.057
X_{13}	0.185	0.082	0.237	0.058	-0.026	0.776*	-0.015
X_{14}	0.221	0.023	0.094	0.119	0.130	0.681*	0.021
X_{15}	0.621*	0.322	0.056	-0.034	-0.180	0.342	0.204
X_{16}	0.594*	0.084	0.316	-0.032	-0.212	0.043	0.180
X_{17}	-0.050	0.127	0.812*	0.191	0.001	0.172	0.193
X_{18}	0.285	0.124	0.580*	0.167	0.267	0.187	-0.033
X_{19}	0.303	0.016	0.570*	0.288	0.540	0.202	-0.162
X_{20}	0.453	0.145	0.164	0.052	0.701*	0.161	0.058
X_{21}	0.391	0.195	0.012	0.055	0.645*	-0.029	0.231
X_{22}	-0.034	0.069	0.181	0.558*	0.188	0.141	0.213
X_{23}	-0.064	0.128	0.156	0.926*	0.019	0.088	-0.022

Source: Field Survey (2017) *Significant loadings

Factor IV has significant loadings on 2 variables with an eigenvalue of 1.30 and explains 4.0% of the total variance. The variables are X22 (number of manufacturing industries), X23 (number of people employed in the industries) and thus this factor is called industrial facilities.

Factor V has significant loadings on 2 variables, namely X20 (Population with secondary education only) and X21 (number of teachers), and accounts for 4.1% of the total variance. Therefore this factor is known as quality of education.

Factor VI has high factor loadings on 2 variables, namely, X13 (number of doctors) and X14 (number of nurses/midwives). The underlying factor is, thus,

accessibility to credit facilities. This factor has an eigenvalue of 0.76 and explains 2.8% of the total variance.

Finally, **Factor VII** has a significant loading on only 1 variable, namely, X8 which is (percentage of people employed in industries). It has a factor loading of 0.550, explains 2.7% of the total variance, and has an eigenvalue of 0.72. Variable X3 did not load and therefore not accounted for, either because of the inconsistent data among other factors.

The factor analysis explained further according to (Norman and Streiner (1986) cited in Tabachnick and Fidell, (2001); that if there are few correlations above 0.30 it is inappropriate using factor analysis which clearly is not an issue with the correlation coefficient matrix of the socioeconomic development indicators in this study. Reliability test using KMO and Bartlett's Test of sampling adequacy was carried out to determine the strength of the correlated variables to allow for the factor analysis which varies between 0 and 1. The values closer to 1 are better and the value of 0.60 is the suggested minimum. The approximate Chi-square is 10175.867 with 351 degrees of freedom, which is significant at 0.05 Level of significance and KMO statistic of 0.832, hence the appropriateness of factor analysis for this data. Generally observable was the positive correlation co-efficient typical between most of the socioeconomic development indicators with only a few having negative relationship between them. This shows the interdependency of the various socioeconomic development indicators in the study area.

According to this study, the possible factors underlying the spatial dimension of socioeconomic development came out to be historical, political, social, infrastructural,

cultural, urbanization, natural endowment and others. The result is presented in Table 4.21. The Table explains the factor loadings of the variability of the data in Appendix II and is further explained by a Scree plot (Figure 4.18). The Scree plot displays the eigenvalues associated with the factors in descending order in relation to the number of the component analysis.

Table 4.21: The Underlying Dimensions of Socioeconomic Development in the Study Area

Total Variance Explained

Factor	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
		Total % of Varian	Cumulative %	Total	% of Variance	Cumulative %
1	Transport and Comm.	8.620 31.927	31.927	5.700	21.113	21.113
2	Educational infrastruc	2.974 11.015	42.942	2.654	9.829	30.941
3	Commerce and Trade	1.675 6.205	49.147	2.166	8.021	38.962
4	Healthcare facilities	1.299 4.811	53.958	2.010	7.444	46.406
5	Cooperative Societies	1.100 4.076	58.034	1.802	6.675	53.081
6	Local craft Indust.	.759 2.810	60.844	1.752	6.489	59.571
7	Manufacturing Indust.	.716 2.651	63.495	1.059	3.924	63.495

Extraction Method: Principal Axis Factoring.

Source: Field Survey (2017)

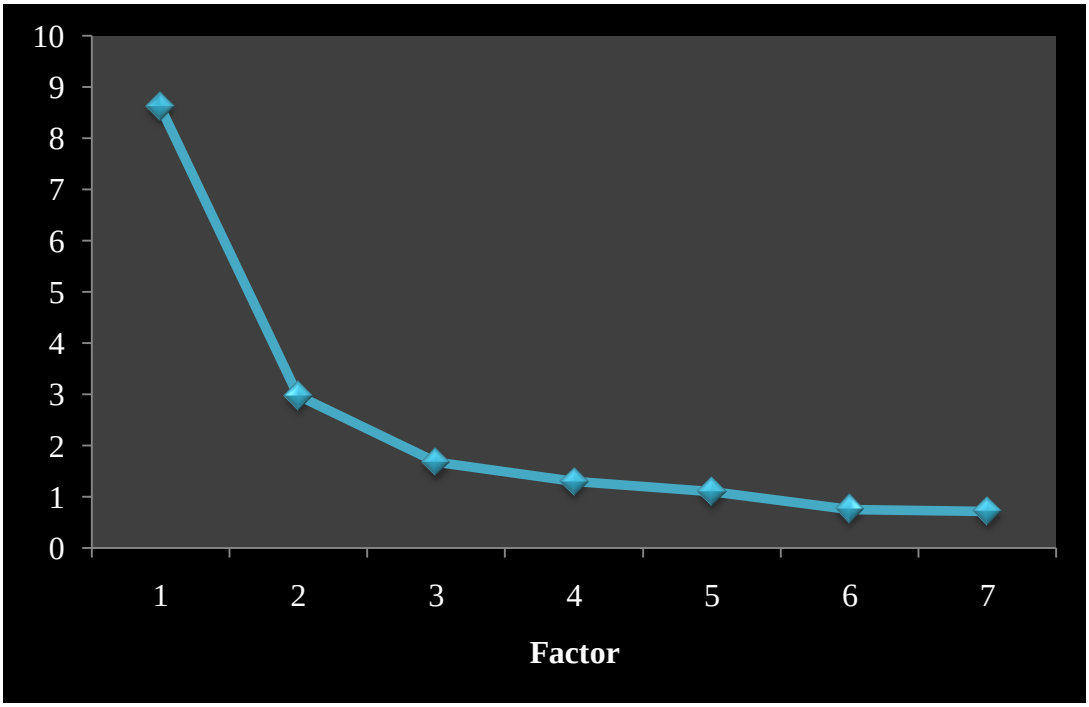


Figure 4. 18: **Distribution of Factors Loadings**

Source: Field Survey (2017)

Figure 4.18 is a scree plot which reveals the factor loadings to identify the manner in which the explained variation is distributed. This plot demonstrates the distribution of the variance among the factors graphically. The 'elbow' shape of the curve shows that higher order factors contributed a decreasing amount of additional variance with a marked decrease after the seventh factor. This implies that the socioeconomic development in the study area can be explained by the first seven factors which have actually been explained.

4.5.3 Addressing the Challenges Facing Socioeconomic Development in Kogi State

The study explained and described the challenges that further affect the pattern of distribution of socioeconomic facilities, confirming or disagreeing with what the other analysis found out, that socioeconomic activities are spatially unevenly distributed. Former studies such as; Akpan (2000), Atser (2008), Antai (2011), Nengak and Osagbemi (2011) and a host of other researchers as referenced in this work have used different analytical methods to study spatial pattern and resulted that factors such as;

historical, political, social, infrastructural, cultural, urbanization, natural endowment and lots more are responsible for the disparities in the level of economic development in both developed and underdeveloped nations.. This present study also examined the respondents' perception on the factors they think influences the spatial pattern of socioeconomic development in their Local Government Area in the State. The result is presented in Table 4.22.

Table 4.22: Possible factors influencing the Location of Facilities in Kogi State

Factors	**Agree**		**Undecided**		**Disagree**	
	Freq	%	Freq	%	Freq	%
Political Reasons	521	80.3	83	12.8	45	6.9
Tribalism	158	24.3	159	24.5	332	51.2
Natural Factors	267	41.1	179	27.6	203	31.3
Climatic Factors	275	42.4	155	23.9	219	33.7

Source: Field Survey (2017)

The factors examined here which have been carefully selected from the result gotten from the reconnaissance survey carried out as reasons why some particular LGAs seem to be neglected and not developed. Four of these factors were examined and they are; Political reasons, tribalism, natural factors and climatic factor.

The study reveals that more than half of the respondents perceived political reasons as the major factor influencing the location of infrastructural facilities in the study area. This corroborates the assertion of Nyam (2005) that the observed insufficient and uneven distribution of socioeconomic facilities is attributed to various reasons chief among which are poverty and political neglects. It also corroborates the assertion of Oyekanmi et al (2011) that Kogi east Senatorial district is more advantaged over the other two districts in the distribution of all categories of Health Care Facilities (HCF) and that is not as a result of private or community effort but rather massive government support. It further explained that Kogi East senatorial district which has produced the

civilian Chief Executives of the state since its creation in 1991 until recently 2016/2017 which made the district to rank far ahead of the other two districts in the distribution of HCFs. It also agreed with Friedmann (1972) in Todaro (2000) which stated that the use of government and economic power is probably the most important single influence on spatial differentiation of human life chances in the development of urban systems. Also the significance of politics in other regions as well as Kogi State in determining intercity distribution has been stressed by writers in geography. A distinction is often made between institutional bases of influence and power vested in individual.

In the former, power is attributed to people's access to political parties, business corporations, religious organization and others which have power resources in such forms as wealth, votes or prestige; persons able to employ an institution's power resources are considered to have power. In the later, the compliance of others is based on the power that an individual can bring to interpersonal relations, such as those between monarch and subjects, employer and employees, union leaders and members, or consumer and monopoly supplier. With this there is bound to be uneven distribution of resources.

Tribalism as perceived by the respondents reveals that a few above half of the respondents 'disagreed (51.2%) that tribe does not play a key role in the location of facilities in the study area. 24.5% were undecided and 24.3 agreed totally. In the study area, the sample of population in agreement is the minority group in a section of the community who feel cheated. This is also in agreement with the research of Oyekanmi et al (2011) which retreated that a particular tribe in the state has been in the fore front of producing the civilian chief executives of the state since the creation of the state.

This may be the reason why the eastern senatorial district is more developed holding all other factors constant.

The research also confirmed that 41% of people agreed that natural factor is responsible for the pattern of infrastructural distribution. 31% did not agree and 27% were indifferent. This corroborate with the work of Oduro et al (2014), where natural factor such as forest resources in the forest zones are more socio-economically developed than those located in the savannah zone. This may account for the reason why Kogi east senatorial district is more developed than the other two districts. This is reflected in chapter three of this work under vegetation in the study area where it is observed that the rain forest vegetation covers Dekina, Ofu, Ankpa, Olamabore, Idah and Bassa which are the LGAs in the eastern senatorial district.

The west and the central senatorial districts such as Yagba-East, Yagba-West, Kabba-bunu, Ijumu, Kogi, Mopa-muro, Lokoja and Kogi are in the guinea savannah with some parkland vegetation. These areas do not have the natural advantage of forest vegetation the eastern senatorial district has that has lead to some form of the economic development. This also is a possible factor of uneven development holding all other factors constant.

Climatic factor is also among the factors that may possibly determine infrastructural distribution in the state as observed by the respondents. There is the possibility that the type of climate in the eastern senatorial district of the state favours the growth of luxuriant vegetation which in essence affects the socio-economic development of the

areas under the LGA holding other factors constant. Less than half (42.2%) of the respondents agreed, 23.9% were undecided and 33.7% disagreed.

Climatic factor may be responsible for the differential distribution of some socioeconomic infrastructures like markets, industries, communication services and a host of other infrastructures in the study area. As seen in chapter three of this work under climate, that climatic condition has in no small measure has affected the socioeconomic development of Kogi state. Climatic type is responsible for the vegetation type in the study area which in essence brings about some kinds of industries and employment opportunities. The type of vegetation in an area can be bring about some kinds of multiplier effects in terms of lumbering industries, sawmill industries and other things. This is in agreement with the work of Oduro et al (2014) in the analysis of the determinant of spatial inequality in Ghana, the result shows that as Ghana is concerned, districts located in the forest zone tend to be more socio-economically developed than districts located in the savannah zone. This is primarily due to a number of peculiar natural constraints that hinder development in the savannah zone. These include long periods of drought, perennial bushfires, frequent and extensive spates of flooding, and a short farming season.

The consequences of these factors for communities located in the savannah zone include seasonal unemployment (during the long dry season), food insecurity, limited sources of livelihoods, high levels of poverty, and out-migration of the youthful and educated segments of the population. This brings about inequality in development.

4.5.4 Miscellaneous Factors Responsible for the Pattern of Socioeconomic Development in Kogi State

The pattern of socio-economic development in Kogi State is also as a result of some miscellaneous factors discovered in the survey. These factors includes among other factors; senatorial divide, natural environment, proximity to national capital, political power, and government policies. These factors were carefully observed and researched. Table 4.23 explains at a glance the percentages enjoyed by each senatorial district.

Table 4.23: Other Factors responsible for the Differentials in Socioeconomic Development

	Western Sen. Dist %	Eastern Sen. Dist %	Central Sen. Dist %
Senatorial divide	15	55	30
Natural environment	10	40	50
Proximity to national Capital	15	35	50
Political power	5	65	30
Government policies	20	50	30

Source: Field Survey (2017)

4.5.4.1 Senatorial Divide

The Western senatorial district has persistently lagged behind the eastern senatorial district in terms of socioeconomic development as portrayed in the analysis in the previous page. This is as a result of policy neglect and systematic discrimination that date back to British colonial rule which corroborate the work of Oyekanmi et al (2011). It is clear that the advantage of Kogi east Senatorial district over the other two in the distribution of all categories of socioeconomic facilities is not as a result of private or community effort but rather massive government support. Kogi east senatorial district which has been producing the civilian Chief Executives of the state since its creation in 1991, until recently probably is responsible for the high ranking of the district far ahead

of the other two districts in the distribution of the various facilities. There are more healthcare facilities in the eastern senatorial district based on the Z-Score and the LQ analysis. This is also the same for other facilities. Table 4.22 reveals the percentage distribution.

4.5.4.2 Natural Environment

The natural environment is also a probable factor. It is proposed that the level of socio-economic development of a region holding every other factor constant is dependent on the natural environment within which it is located, including ecological conditions and natural resource endowments (Oduro *et al,* 2014). That is, differences between districts in terms of natural forces are expected to translate into different levels of human wellbeing. The natural environment in this area includes the rain forest and the savanna vegetation.

The rain forest vegetation which covers Dekina, Ofu, Ankpa, Olamaboro, Idah and Bassa local government areas with rich wooded trees including palms, Iroko and mahogany. The rain forest vegetation is a natural advantage for the eastern senatorial district. It has attracted lumber men from the neighboring villages and states which in turn led to the establishment of saw mill industries of various categories in the senatorial districts. There are more job opportunities in the senatorial district compared to the other two senatorial districts. As a result of the saw mill industries, other local and small medium scale industries emerged, such as upholstery, carpentry, food vending, snacks and drinks shops and a host of others. All these have led to inequalities in the socio-economic activities of the area. Other local government areas in the west and the central senatorial districts such as Yagba-East, Yagba-West, Kabba/Bunu, Ijumu, Kogi, Mopa-muro, Lokoja and Kogi are in the guinea savannah with some

parkland vegetation which only favour some form of farming activities. The grasses are tall and very luxuriant, but do not have the natural advantage of forest vegetation the eastern senatorial district has that has led to some form economic development. These senatorial districts engage in farming according to what their environment can offer.

4.5.4.3 Proximity to State Headquarters

By reason of a LGA status and administrative centres, (capitals) they attract more governmental and non-governmental activities and population than ordinary towns and cities. Thus, by virtue of their status and functions, State and Local government headquarters have the potential to develop faster than other settlements which are not. In the 21 LGAs, It is only Lokoja that doubles as a regional, state and local government headquarters which by implication perform better than those that are not. That is, holding all other factors constant, it is proposed that towns that double as regional, state capitals and Local government headquarters are more developed than ordinary districts. The state capital, Lokoja is the state's industrial and commercial hub and thus receives more investments than any other district, which is expected to make it the most developed LGA in the state all things been equal. This may not be because of a number of reasons among which is population that is available to share the available facilities.

The Local government area is also closer to the National Capital (Abuja) and as a result of these commercial activities the LGA is supposed to be more viable than the other Local government areas. It was also gathered that the LGAs closer to Lokoja the State Capital enjoy some form of developments than those farther away. This can be summarized into distance barrier, political and other things. Roads are more developed in these LGAs, water, healthcare and other infrastructures are better developed in these areas. This is agreement with the works of Oduro *et al,* (2014) in Ghana which support

the works of Acquah 1957 cited in Grant and Yankson (2003) which states that Accra should not have been the most developed city in Ghana.

The work further states that, the city of Accra which is located at the heart of the narrow coastal savannah belt which is dryer and experiences harsher ecological conditions than districts located in the interior (northern) savannah. It went further to explain, that about 200 years ago, Accra was little more than a trading post, undifferentiated from many of the other post along the Gold coast. But the decision of the British colonialists to develop the place as a new colonial capital in 1877 transformed Accra from a village to a city. And as the country's industrial and commercial hub, Accra together with the neighboring city of Tema receives more investments than any other district. And it found out, that the city has over the decades played the role of a national development node from which innovations, economic growth and social transformation originate and trickle down to other parts of the country. Lokoja is found to have such an advantage with her status as a road junction, LGA headquarters and a state capital.

4.5.4.4 Political Power

The only general agreement appears to be that power involves the capacity of a person or group to achieve compliance from others to bring about or resist change (Isa, 2006). In other words, power concerns ability to influence the actions and beliefs of others. Who get what, where, and how? Is very much a matter of practical politics? The use of government and economic power is probably the most important single influence on spatial differentiation of human life chances in the development of urban systems. Also, the significance of politics in determining infrastructural distribution is veryimportant.

Kogi State was created in 1991 and since the creation of the state till 2015, the eastern senatorial district has been producing the state governors, names cannot be mentioned for security reasons. And by reason of their status as the people in government, the district attracts more governmental and non-governmental activities, which is in agreement with Nyam (2005) that the observed insufficient and uneven distribution of socioeconomic facilities inNigeria is attributed to various reasons among which are political neglect.

The Eastern senatorial district stands as the state's industrial and commercial hub and thus receives more investments than any other district, making it the most developed district in the state. Kogi East senatorial district consistently remained at the top of the development ladder, while, Kogi Central remained persistently at the bottom of ranks and Kogi west senatorial district occupied the middle position.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY OF FINDINGS

The analysis has shown clearly that there exists inequality in the distribution of the socioeconomic variables that cumulates into inequality in economic development in Kogi State, Nigeria.

The distribution of the facilities of economic development employed in this study has a reflection of marked spatial variations among the LGAs in the study area. All the dimensions used manifested some levels of spatial inequality in their distribution. While some LGAs recorded LQs of 1 indicating a high performance in the socioeconomic development infrastructures, Some LGAs recorded negative scores indicating low performance. The LQ technique showed that some local government areas performed better than others in the distribution of essential services to the people.

It is clear that some areas have more than their average shares in some of the variables while some others have less. The pattern of distribution of socioeconomic development infrastructures is compact and concentrated in a few urban areas of the state compared with distant areas. Some areas actually receive more government support than others. These areas enjoy high level of infrastructural facilities and as such are developed than others.

The extent of spatial inequality in socioeconomic development infrastructures was also determined by subjecting the data to hypothetical tests at different levels of significances. The study reveals a significant pattern of inequalities in the level of distribution of the various socioeconomic infrastructural facilities used in this study.

The level of socioeconomic development among the LGAs showed categories of development which cumulated into the LGAs being ranked as upper, middle and bottom based on their performance in the distribution of facilities. It was discovered that the upper group has seven LGAs that performed excellently well with high LQs having Ogori (1.82) and Idah (1.78) to be the most advantaged. It was also discovered, that seven LGAs were highly disadvantaged of which Adavi (0.60) and Okene (0.58) were the most disadvantaged.

In kogi state, there seems to be a discernible pattern of inequalities in development indicators across LGAs of the state. Some LGAs enjoy huge government presence, while others suffer complete neglect or fairly enjoy government presence. The study also revealed that among other factors responsible for the observed pattern in the study area include economic, environmental, government, geographical location among others.

On the basis of factors responsible for the pattern of socioeconomic development differentials in the study area, the study discovered thatnatural factor 27.6 % and tribalism 24.5%ranked very high than other factors.

The challenges of the pattern of socioeconomic development in the study area were examined. It was discovered that the socioeconomic differentials was attributed to political reasons and a huge government presence.It is important to write here that; as a result of the varying proportions of inequalities experienced in this study, it shows that the government both at the top and the lower level have enormous role to play within the space-economy as it affects the distribution of socioeconomic facilities. The issue

of inequality in the distribution of basic socioeconomic facilities is not confined to the local government areas alone but also serious attention should be focused on both intra-local and state administrative entities.

5.2 CONCLUSION

This study has been able to address some major issues in the spatial inequalities in socioeconomic development in kogi state. It has been able to analyze the extent of spatial variation in socioeconomic development in the state stressing major developmental problems in the study area that requires serious attention. One of the reasons why it requires serious policy attention is that it threatens national security.

The study has revealed that some areas are having more than average shares, thus making such facilities to be localized. In fact, education, health care, good water, good roads and electricity are basic and fundamental to survival of life. No citizen should be denied or deprived of these essential services. But it is clear that, these services are localized in the study area which, thus means, that one would have to travel long distances before you can enjoy them, like having to live in bigger towns. This kind of lopsided spatial pattern of development tends to aggravate the problem of regional imbalance which the federal government should try to correct.

While government recognized the population mobility from the rural to urban centres and each successive government had always come out with rural development strategies, it has always been effort in futility. Some of the strategies include river basin development scheme, better-life for rural women, community development scheme, integrated rural development, directorate of food, roads and rural infrastructures and

mass mobilization programme. The failure of these strategies to achieve the desired goals is centered on non-programmatic approach to development planning.

The result revealed that there is a consistently high level of infrastructural distribution inequality in the study area. Generally most of the LGAs are found to be disadvantaged in these facilities. This is a pointer to the socioeconomic planners that many LGAs and people in the state are still marginalized and wallowing in abject poverty.

5.3 RECOMMENDATIONS

The following recommendations are proffered to help tackle the problems and challenges militating against infrastructural distribution injustice in Kogi State, Nigerian in order to achieve a better infrastructural distribution.

(1) The government has to be more proactive in developing ways and means of bridging the gap between the advantaged and the disadvantaged areas of the state. Part of this would involve more positive discriminatory investments in favour of the less privileged areas in subsequent resource allocations by government, community leaders and individual philanthropists. Really there is no doubt that if all areas had equal amount of influence in the manner that common resources are distributed, there definitely would have been greater degree of equality.

(2) The community development strategy can be encouraged with the community that embarked upon socioeconomic projects like building of schools, construction of roads, bridges, health centres, electrification and water projects by giving such communities financial and technical assistance. By doing so,

both the government and the community can be partners in progress and inequality can be bridged to some extent.

(3) The disadvantaged local government areas can also be transformed by purposeful discriminatory investments in favour of those areas that are disadvantaged. This can be done by concentrating investments in such local government areas. The process of rehabilitation may be by redirecting government's development projects and attention to such communities or accelerate development process through private collaboration and efforts of corporate individuals.

(4) Developing marginalized areas can abate misunderstanding and discontentment that may arise when backward communities feel they are unfairly catered for. Rehabilitating backward communities will promote economic growth and help to improve the well-being of the communities concerned. The people in authority need to improve on the spatial distribution of all economic facilities such that a distributive justice is ascertained in all areas that make up the state and Nigeria as a whole. A situation where over a half of the territory of its jurisdiction suffered from deprivation suggests that there is room for improvement.

(5) In conclusion, the study therefore suggests a business friendly environment to encourage small and medium scale business and entrepreneurs to partner with the state government to develop the state through developmental projects.

5.4 SUGGESTIONS FOR FURTHER STUDIES

This study identified that there are a good number of policy and planning implications for economic growth and development with regard to spatial inequalities in Kogi State and the country as a whole. It is apparent from the foregoing that tremendous research

efforts have gone into the study of spatial inequalities of socioeconomic development, yet there still exist gaps in knowledge. The following gaps have been identified:

First, subsequent studies can use political economy perspective for the understanding of the structure and pattern of spatial inequalities, both in the rural and urban areas.

Secondly, there is not enough studies that has used economic, social and spatial measures of development that capture social structure, national institutions, quality of environment and poverty alleviation for understanding the inner meaning of spatial inequalities of socio-economic development.

Thirdly, further studies may undertake to examine spatial inequalities in socio-economic development using different statistical techniques such as Lorenz curves, and Gini-co-efficient different from those adopted in this present study.

Lastly, this study adopted local governments as unit of observation; subsequent studies may decide to use senatorial, districts or wards and compare results.

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APPDENDICES

Appendix I:
QUESTIONNAIRE FOR RESPONDENTS

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL MANAGEMENT, AHMADU BELLO UNIVERSITY, ZARIA

Dear Respondent,
I am a student of the above named department undertaking a study. This questionnaire is designed to elicit information on the spatial Inequalities in socio-economic development in Kogi State, and you are one of the carefully selected respondents. The exercise is purely an academic work and all information will be treated confidentially. I plead for your maximum cooperation in completing the questionnaire.

Thanks
Grace Foluke Balogun

Instruction: Please tick in the appropriate boxes to the following questions as appropriate.

SECTION A: SOCIO-ECONOMIC PROFILE OF THE RESPONDENTS

1. Name Of Local Government Area/ Ward_____
2. Sex: (a) Male ( ) (b) Female ( )
3. Age (a) Less than 25 years (b) 25-29 years (c) 30-39 years (d) 40-49 years (e) above 50 years
4.Marital Status: Single ( ) Married ( ) Divorced ( ) Widow/Widower ( )
5.Educational qualification : No formal education ( ), primary education ( ) secondary education ( ) Tertiary education ( ), others (specify) ----------
6. Occupation: Farming ( ) Trading ( ) Civil service ( ) Any other (specify) ----------
7. Income level: No fixed income ( ) below N18 000 ( ) N18 000 – N20 000 ( ) N20 000-N40 000 Above N40 000 ( )
Family Size: Less than 5 ( ) 6-10 ( ) 11-15 ( ) Above 15
8. Which of the following facilities is/are available in your village?
i.Schools ( ) ii.Hospitals ( ) iii. Hotels ( ) iv. Communication system ( ) v. market ( ) vi. Tv viewing centres ( ) vii.Town Halls ( ) viii. Banks( ) PHCN ( ) Transport system
9.What are the socioeconomic effects of the above facilities on economic growth and development on your village?

S/N	Variables	Agree	Undecided	Disagree
1	Increase in level of Literacy			
2	Easy to communicate to people outside the village			
3	Reduction in the rate at which people die from preventable diseases			
4	Connection to the National Grid (PHCN) has increased sales drastically.			
5	More people are educated now than before			
6	People settling more in the village			

7	Improved movement in and out of the village			
8	Increased level of social Interactions			
9	Surrounding villages easily bring their goods to the markets in my village			
10	Setting up of more businesses/shops in the village			
11	Improved access to better health care services			

SECTION B: EDUCATION

(10) What are the available school (s) in this village?

(i) Nursery/Primary school ( ). (ii) Secondary school ( ).(iii)Primary school and Secondary school ( ) (iv)Post-secondary school ( ) All of the above ( ).

(11) How many schools are there in this village?

(vi)Primary school----------

(vii) Secondary school----------

(viii) Post-secondary school-----

(11) Number of children in School---------

(12) Number of children not in school--------

(13) How far is your children school to you house?

Less than 1km ( ) 1-2km ( ) above 3km

(14)How do they go to school?

By walking ( ) By bicycle ( ) By Okada ( ) By Bus/cab

(15) How much do you pay to access this facility?

(a)No cost (b) N20-N100 (c) N101-N200 (d) N201-N300 (e) N301-N400 (f) N401-N500 (g) N501-N600

(16) What are the possible benefits this village has benefited from the schools available?

S/N		Agree	Undecided	Disagree
1	job creation			
2	Ability to communicate in more than one language			
3	Acquired technical skills and vocational training			
4	Ability to learn new skills easily outside of school			
5	Acquired valuable agricultural skills and training			
6	Ability to socialize more easily			

7. Any other benefit (specify)----------

(17) What are the main problems concerning schools in this village? ----------

(18) How can we solve the problem(s)? ----------

(19) Are there other villages in this state that you think are more favoured than your own village in terms of number of schools and types? Yes ( ) No ( )

(20) If yes, what are the reasons for this?

S/N	Factor	Agree	Undecided	Disagree
1	Political reason			
2	Tribalism			
3	Natural factor			
4	Climatic factor			

SECTION C: COMMERCE AND TRADE

(21) How many markets do you have in this village? ----------

(22) What type are they?

Periodic ( ) Daily ( ) Both ( ).

(23) Do people from surrounding villages come to the market?

Yes ( ) No ( )

(24) If yes, what is the distance from their villages to the market?

Less than 1km ( ) 1-2km ( ) Above 3km ( )

(25)How much do you pay to access this facility?

(a)No cost (b) N20-N100 (c) N101-N200 (d) N201-N300 (e) N301-N400 (f) N401-N500 (g) N501-N600

(26) In what ways has the market (s) been of benefit to the community?

S/N	Variables	Agree	Undecided	Disagree
1	A major source of income			
2	provides sources of employment			
3	Acts as an agent of innovative diffusion			

(d)Any other (specify) ----------

SECTION D: BANKING SERVICES

(27)Which of the following banks are available in your area?

(i) First Bank( ) (ii)Skye Bank ( )

(iii) Eco Bank ( ) (iv) Community Bank ( )

(v) GT Bank ( ) (vi) Micro Credit Finance House( )

(vii) Unity Bank ( ) (viii) No Bank ( )

(ix)Any other, Specify ----------

(28)What benefits have you derived from the banks?

_____

(29)How much do you pay to access this facility?

(a)No cost (b) N20-N100 (c) N101-N200 (d) N201-N300 (e) N301-N400 (f) N401-N500 (g) N501-N600

(30)How long do you walk to access these health facilities?

Less than 1km ( ), 1-2km ( ), Above 3km ( ).

(32) What problems do people in this community face with banking?

_____

(33)How can these problems be solved?

_____

SECTION E: ADMINISTRATION

(34)Which of the following local Government Offices is located in this Town/village?

i L.G, Headquarter ( ).

ii Area development office ( )
iii None
(35)How does the location of the local Government office affect the development of this town?
(i)It boosts trade ( )
(ii)Increase services ( )
(iii)Increase in social amenities ( )
(iv)Increase in new housing construction/population ( )
(iv)Any other (specify)

---

(36)How long do you walk to access these health facilities?
Less than 1km ( ), 1-2km ( ), Above 3km ( ).

SECTION F: PUBLIC UTILITY

Electricity

(37) What is the source of electricity in this community?
i. PHCN( ) ii Solar power ( ) iii. Petrol/Gas generator ( )
iv. Any other source (specify) ----------
(38) How steady is the power from PHCN?
very constant ( ) constant ( ) erratic supply( ) worst ( )
(39)How much do you pay to access this facility?
(a)No cost (b) N20-N100 (c) N101-N200 (d) N201-N300 (e) N301-N400 (f) N401-N500 (g) N501-N600

water supply

(40)What are the sources of water in this settlement?
i.Tap ii. Borehole iii. Well iv. River / stream
v. other sources (specify) ----------
(41)How much do you pay to access this facility?
(a)No cost (b) N20-N100 (c) N101-N200 (d) N201-N300 (e) N301-N400 (f) N401-N500 (g) N501-N600

SECTION G:TRANSPORT AND COMMUNICATION

(42)Do you own a car? Yes ( ) No ( )
(43)If yes, What means of transport do you own?
i.car ii. Truck iii. Motocycle iv.Bicycle
v. Any other (specify) ----------
(44) Are there commuter cars/buses in this village? Yes ( ) No ( )
(45) What main transportation problems do you experience in this town/village?

S/N	Variables	Negligible	Moderate	Serious	Very Serious
1	Bad road				
2	Inadequate transport service				
3	High cost of transport				
4	Overloading				
5	Poor condition of vehicles				
6	Unnecessary delays on the road				
7	Highway robbery				

Road Network

(46) Are there major roads in this settlement? Yes ( ) No ( )

(47)What are the conditions of these roads?
i. Good ii bad iii worst
(48) Are there roads here that are not motor able?
i. yes ( ) ii No ( ) iii undecided

Communication

(49).What are the available networks in this town/village?
i. MTN ( ) ii. GLO ( ) iii AIRTEL ( ) iv STARCOMMS ( )
v. Any other (Specify) ----------
(50) What is the condition of GSM network in this settlement?
good ( ) fair ( ) Bad

SECTION H: HEALTH CARE

(51).What type of health facilities do you have in this town/ village?
i. General Hospital ( ) ii. Primary Health care centre ( )
iii. Clinics / Dispensary ( ) vi.Medicine Stores ( )
(52)How many of these facilities are available in this town/village?

Health Care Facilities	Number
General Hospitals	
Primary Health Care Centre	
Clinics/Dispensary	
Patient Medicine Stores	

(53)How many of these Medical Staff are available in these health facilities?

Medical Staff	Number
Doctors	
Nurses	
Midwives	
Paramedical Staff	

(54) What is the general condition of these facilities?
i. Excellent ii. Good iii. Bad shape iv. Very bad
(55) Are the facilities accessible?
i. often ii. Seldom iii. Sometimes iv. Never
(56)How long do you walk to access these health facilities?
Less than 1km ( ), 1-2km ( ), Above 3km ( ).
(57)How much do you pay to access medical care?
(a)No cost (b) N20-N100 (c) N101-N200 (d) N201-N300 (e) N301-N400 (f) N401-N500 (g) N501-N600

SECTION I: RECREATION AND TOURISM

(58).Are there recreational facilities in this settlement? Yes ( ) No ( )
(59). If yes which types are available?
i. Football fields ( )
ii. Community halls ( )
iii. TV viewing centres ( )
iv. Playing ground (parks) ( )
v. Others (Specify) ----------

SECTION J: INDUSTRY

(60) Are there industries in this settlement? Yes ( ) No ( )
(61) If yes, how many industries are there? (a) 0-5 (b) 6-10 (c) 11-20
(62) How many people are employed in your industry (a) 0-10 (b) 11-20 (c) 21-30 (d) 31-40
(63) How many local industries in your area? (a) 0-5 (b) 6-10 (c) 11-15
(64)How many modern industries (a) 0-5 (b) 6-10 (c) 11-15 (d) 16-20

Appendix II:
QUESTIONNAIRE FOR LOCAL GOVERNMENT HEADQUATERS

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL MANAGEMENT
AHMADU BELLO UNIVERSITY, ZARIA

Dear Respondent,

I am a student of the above named department undertaking a study. This questionnaire is designed to elicit information on the spatial Inequalities in socio-economic development in Kogi State, and you are one of the carefully selected respondents. The exercise is purely an academic work and all information will be treated confidentially. I plead for your maximum cooperation in completing the questionnaire.

Thanks

Grace Foluke Balogun

Instruction: Please tick in the appropriate boxes to the following questions as appropriate.

NAME OF L.G.A_____

SECTION A: EDUCATION

(i) What are the available schools in this L.G.A?

(ii) Primary school ( )

(iii) Secondary school ( )

(iv)Post-secondary school ( )

(v) How many of these schools are here in this L.G.A?

(vi) Nusery/Primary school----------

(vii) Secondary school----------

(viii) Post-secondary school--------

SECTION B: COMMERCE AND TRADE

(i) How many markets do you have in this L.G.A? ----------

(ii) What type are they?

Periodic ( ) Daily ( ) Both ( ).

(iii) How many are periodic? ( )

(iv) How many are Daily? ( )

SECTION C: BANKING SERVICES

Which of the following banks are available in this L.G.A?

(i) First Bank( ) (ii)Skye Bank ( )

(iii) Eco Bank ( ) (iv) Community Bank ( )

(v) GT Bank ( ) (vi) Micro Credit Finance House( )

(vii) Unity Bank ( ) (viii) No Bank ( )

Any other, Specify ----------

How effective are they?----------

SECTION D: ADMINISTRATION

1. In which town/village is this LGA Headquarter located?_____
2. Which of the following local Government Offices is/are located in this LGA and how many are they?

i Office of the Internal Board of Revenue. ( )

a. below 5 ( ),
b. between 5 -10 ( ),
c. above 10 ( )

ii L.G Education Board. ( )

below 5 ( ), between 5 -10 ( ), above 10 ( )

iii. Security outfits (Police, DSS, Civil Defence) ( ).

below 5 ( ), between 5 -10 ( ), above 10 ( )

Iv. Various Medical and Health Centres ( ).

below 5 ( ), between 5 -10 ( ), above 10 ( )

v. Others specify…….

3. How does the location of the local Government office affect the development of this town?

(i) It boosts trade ( )
(ii) It increases social amenities and services ( )
(iii) It boosts urban growth and development
(iv) It leads to increase in total population ( )
(v) Any other (specify) ----------

SECTION F: PUBLIC UTILITY

Electricity

(a) What is the source of electricity in this L.G.A ?

i. PHCN ( ). ii Solar power ( ). iii. Petrol/Gas generator ( ). iv. Any other source (specify) ----------

(b). How steady is the power from PHCN?

i. very constant ( ) ii. constant ( ) iii. erratic supply( ) iv. worst ( )

Water supply

a. What are the sources of water in this L.G.A?

i.Tap ( ). ii. Borehole ( ). iii. Well ( ). iv. River/stream ( )

v. other sources (specify) ----------

SECTION G: TRANSPORT AND COMMUNICATION

(a) Are there commuter cars/buses in this L.G.A? Yes ( ) No ( )

(b) Are the commuter cars/buses privately owned or publicly owned?

i privately owned ( ). ii. Publicly owned ( ).

(c) If the commuter cars/buses are both privately and publicly owned, what is the percentage of ownership? (Specify) ----------

(f) What main transportation problems do you experience in this L.G.A.? (please specify). ----------

Road Network

(a) How many major roads are in this L.G.A?
below 5 ( ), between 5 -10 ( ), above 10 ( )

(b) How many minor roads are in this L.G.A?
below 10 ( ), between 10 -20 ( ), above 20 ( )

(c) What are the conditions of these roads?
i. Good ( ), ii. Bad ( ), iii. Worst ( ),

(d) Are there roads in this L.G.A that are not motor able?

i. Yes ( ). ii. No ( ).

Communication

(a).What are the available networks in this L.G.A?

i. MTN ( ).

ii. GLO ( ).

iii. AIRTEL ( ).

iv. STARCOMMS ( ).

v. Any other (Specify) ----------

(b) What is the condition of GSM network in the Local Government area?

i. Very good ( ). ii. Good ( ). iii. Bad ( ). iv. Very ( ). v. No network ( )

SECTION H: HEALTH CARE

(a).What type of health facilities do you have in this L.G.A?

i. General Hospital ( ), how many--------

ii. Primary Health care centre ( ) how many--------

iii. Clinics ( ), how many--------

iv. Dispensary ( ), how many--------

v. Pharmacy ( ), how many--------

vi. Medicine Stores ( ), how many--------

(c) How many of these medical staff is in your hospital?

Doctors_____, Nurses_____,

Midwives_____, Paramedical_____.

(e) What is the general condition of these facilities?

i. Excellent ( ), ii. Good ( ), iii. Bad shape ( ), iv. Very bad ( ).

(e) Are the facilities accessible?

i. often ( ), ii. Seldom ( ), iii. Sometimes ( ), iv. Never ( ).

SECTION I: RECREATION AND TOURISM

(a).Are there recreational facilities in this settlement? Yes ( ) No ( )

(b). If yes which type(s) are available?

i. Football fields ( ), how many--------

ii. Community halls ( ), how many--------

iii. TV viewing centres ( ), how many--------

iv. Playing ground (parks) ( ), how many--------

v. Others (Specify) ----------

SECTION J: INDUSTRY

(a).Are there industry(ies) in this L.G.A.? Yes ( ) No ( )

(b) If yes, how many industries are there?

(a). Less than 5 industries ( ),

(b). 6-10 industries ( ),

(c). More than 11 industries ( ).

(c) How many people are employed in your industry?

(a). Below 10 people( ),

(b). 11-20 people ( ),

(c). 21-30 people ( ),

(d). More than 40 people ( ).

(d). How many local industries are in your L.G.A.?

(a). Less than 5 ( ).

(b). 6-10 ( ).

(c). more than 11 ( )

(e) How many modern industries

(a) Less than 5 industries ( ).

(b) 6-10 industries ( ).

(c) 11-15 industries ( )

SECTION K: AGRICULTURE

(a) What type of agriculture do people in this LGA practice?
(a) Subsistence ( ).
(b) Commercial ( ).

(b) How many people on the average work on the farms/day/week?
(a) Less than 5 people ( ).
(b) 6-10 people ( ).
(c) 11-15 people ( ).

(c) What type (s) of implements are used on the farm?
(a) Hoes ( ). (b) Tractor ( ). (c) Cutlass ( ).

(d) What type of crops do they grow on their farm?

(e) (a) food crops ( ). (b) cash crops ( ). (c) both ( ). (c) others specify_____

(f) How many hectares of land are under cultivation per individual?
(a). Below 5 hectares ( ) (b). 6-10 hectares ( ) (c). 11-15 hectares ( ).
(d) Over 16 hectares ( ).

Appendix III:
DATA FOR SOCIO-ECONOMIC VARIABLES

Data for Transport and Communication

LGA	Length of major access road	Number of Post Office boxes	Number of global Comm unication masts	% of people using mobile phones	% of people using radio/ televios sets
Adavi	43	4	12	80	54
Ajaokuta	67	4	10	60	35
Ankpa	63	10	25	60	66
Bassa	79	15	18	56	65
Dekina	84	18	33	70	56
Ibaji	15	8	21	65	49
Idah	45	7	24	70	52
Igalamela	52	8	20	65	55
Ijumu	54	6	10	70	40
Kabba/Bunu	54	10	15	60	48
Kogi	62	6	6	80	35
Lokoja	68	15	35	60	73
Mopa-muro	88	4	8	65	45
Ofu	90	8	25	55	42
Ogori	55	4	7	60	44
Okehi	53	10	15	60	55
Okene	55	8	15	75	60
Olamaboro	35	10	18	78	68
Omala	40	8	20	65	56
Yagba-East	95	7	14	65	45
Yagba-West	98	8	12	65	40

Appendix IV:
LOCATION QUOTIENT FOR THE VARIABLES

LQ for Transport and Communication (LENGTH OF ROAD)

LGA	pop.	LENGTH OF ROAD	S1/S	N1/N	LQ	RANK
OGORI	51136	55	0.0431	0.0116	3.7328	1
MOPA-MORO	144576	88	0.0690	0.0327	2.1125	2
ZAGBA-WEST	179750	98	0.0769	0.0406	1.8922	3
ZAGBA-EAST	189658	95	0.0745	0.0429	1.7384	4
BASSA	179440	79	0.0620	0.0406	1.5280	5
IDAH	102452	45	0.0353	0.0232	1.5244	6
AJA0KUTA	157275	67	0.0525	0.0355	1.4785	7
KOGI	147856	62	0.0486	0.0334	1.4553	8
OFU	245973	90	0.0706	0.0556	1.2699	9
IJUMU	152343	54	0.0424	0.0344	1.2302	10
OMALA	138695	40	0.0314	0.0313	1.0009	11
IGALAMELA	188896	52	0.0408	0.0427	0.9554	12
LOKOJA	252605	68	0.0533	0.0571	0.9343	13
DEKINA	334237	84	0.0659	0.0755	0.8722	14
KABBA BUNU	266176	54	0.0424	0.0602	0.7041	15
ANKPA	341927	63	0.0494	0.0773	0.6395	16
OLAMABORO	203595	35	0.0275	0.0460	0.5966	17
ADAVI	279037	43	0.0337	0.0631	0.5348	18
OKENE	418292	55	0.0431	0.0945	0.4563	19
OKEHI	287201	33	0.0259	0.0649	0.3988	20
IBAJI	163878	15	0.0118	0.0370	0.3177	21
Total	4424998	1275				

Appendix V:

LQ for Transport and Communication (NUMBER OF POST OFFICE)

LGA	pop.	NO OF POST OFFICES	S1/S	N1/N	LQ	RANK
OGORI	51136	8	0.0449	0.0116	3.8892	1
MOPA-MORO	144576	15	0.0843	0.0327	2.5792	2
BASSA	179440	15	0.0843	0.0406	2.0781	3
IDAH	102452	8	0.0449	0.0232	1.9412	4
OMALA	138695	10	0.0562	0.0313	1.7924	5
KOGI	147856	10	0.0562	0.0334	1.6813	6
DEKINA	334237	18	0.1011	0.0755	1.3388	7
IJUMU	152343	8	0.0449	0.0344	1.3055	8
IBAJI	163878	8	0.0449	0.0370	1.2136	9
ZAGBA-EAST	189658	8	0.0449	0.0429	1.0486	10
OLAMABORO	203595	8	0.0449	0.0460	0.9768	11
ZAGBA-WEST	179750	7	0.0393	0.0406	0.9681	12
IGALAMELA	188896	7	0.0393	0.0427	0.9212	13
ANKPA	341927	10	0.0562	0.0773	0.7270	14
AJA0KUTA	157275	4	0.0225	0.0355	0.6323	15
OKENE	418292	10	0.0562	0.0945	0.5943	16
LOKOJA	252605	6	0.0337	0.0571	0.5905	17
KABBA BUNU	266176	6	0.0337	0.0602	0.5604	18
OFU	245973	4	0.0225	0.0556	0.4043	19
ADAVI	279037	4	0.0225	0.0631	0.3564	20
OKEHI	287201	4	0.0225	0.0649	0.3462	21
Total	4424998	178				

Appendix VI:

LQ for Transport and Communication (NUMBER OF GLOBAL COMMUNICATION MAST)

LGA	pop.	NO OF GLO MAST	S1/S	N1/N	LQ	RANK
IDAH	102452	24	0.0661	0.0232	2.8556	1
OMALA	138695	20	0.0551	0.0313	1.7578	2
LOKOJA	252605	35	0.0964	0.0571	1.6890	3
OGORI	51136	7	0.0193	0.0116	1.6687	4
IBAJI	163878	21	0.0579	0.0370	1.5621	5
IGALAMELA	188896	20	0.0551	0.0427	1.2907	6
OFU	245973	25	0.0689	0.0556	1.2390	7
BASSA	179440	18	0.0496	0.0406	1.2228	8
DEKINA	334237	33	0.0909	0.0755	1.2036	9
OLAMABORO	203595	18	0.0496	0.0460	1.0777	10
ZAGBA-EAST	189658	14	0.0386	0.0429	0.8998	11
ANKPA	341927	25	0.0689	0.0773	0.8913	12
ZAGBA-WEST	179750	12	0.0331	0.0406	0.8138	13
IJUMU	152343	10	0.0275	0.0344	0.8002	14
AJA0KUTA	157275	10	0.0275	0.0355	0.7751	15
KABBA BUNU	266176	15	0.0413	0.0602	0.6870	16
MOPA-MORO	144576	8	0.0220	0.0327	0.6745	17
OKEHI	287201	15	0.0413	0.0649	0.6367	18
ADAVI	279037	12	0.0331	0.0631	0.5242	19
KOGI	147856	6	0.0165	0.0334	0.4947	20
OKENE	418292	15	0.0413	0.0945	0.4371	21
Total	4424998	363				

Appendix VII:

LQ for Transport and Communication (% OF PEOPLE USING MOBILE PHONES)

LGA	pop.	MOBILE PHONE	S1/S	N1/N	LQ	RANK
OGORI	51136	60	0.0434	0.0116	3.7515	1
IDAH	102452	70	0.0506	0.0232	2.1845	2
KOGI	147856	80	0.0578	0.0334	1.7299	3
OMALA	138695	65	0.0470	0.0313	1.4984	4
IJUMU	152343	70	0.0506	0.0344	1.4691	5
MOPA-MORO	144576	65	0.0470	0.0327	1.4375	6
IBAJI	163878	65	0.0470	0.0370	1.2681	7
OLAMABORO	203595	78	0.0564	0.0460	1.2249	8
AJA0KUTA	157275	60	0.0434	0.0355	1.2197	9
ZAGBA-WEST	179750	65	0.0470	0.0406	1.1562	10
IGALAMELA	188896	65	0.0470	0.0427	1.1002	11
ZAGBA-EAST	189658	65	0.0470	0.0429	1.0958	12
BASSA	179440	56	0.0405	0.0406	0.9978	13
ADAVI	279037	80	0.0578	0.0631	0.9167	14
LOKOJA	252605	60	0.0434	0.0571	0.7594	15
KABBA BUNU	266176	60	0.0434	0.0602	0.7207	16
OFU	245973	55	0.0397	0.0556	0.7149	17
DEKINA	334237	70	0.0506	0.0755	0.6696	18
OKEHI	287201	60	0.0434	0.0649	0.6679	19
OKENE	418292	75	0.0542	0.0945	0.5733	20
ANKPA	341927	60	0.0434	0.0773	0.5610	21
Total	**4424998**	**1384**				

Appendix VIII:

LQ for Transport and Communication (%of People Using radio/TV sets)

LGA	pop.	RADIO/TV	S1/S	N1/N	LQ	RANK
OGORI	51136	44	0.0406	0.0116	3.5157	1
IDAH	102452	52	0.0480	0.0232	2.0738	2
OMALA	138695	56	0.0517	0.0313	1.6497	3
BASSA	179440	65	0.0600	0.0406	1.4801	4
OLAMABORO	203595	68	0.0628	0.0460	1.3647	5
MOPA-MORO	144576	45	0.0416	0.0327	1.2717	6
IBAJI	163878	49	0.0452	0.0370	1.2217	7
IGALAMELA	188896	55	0.0508	0.0427	1.1897	8
LOKOJA	252605	73	0.0674	0.0571	1.1808	9
IJUMU	152343	40	0.0369	0.0344	1.0728	10
ZAGBA-EAST	189658	45	0.0416	0.0429	0.9695	11
KOGI	147856	35	0.0323	0.0334	0.9672	12
AJA0KUTA	157275	35	0.0323	0.0355	0.9093	13
ZAGBA-WEST	179750	40	0.0369	0.0406	0.9092	14
ADAVI	279037	54	0.0499	0.0631	0.7907	15
ANKPA	341927	66	0.0609	0.0773	0.7887	16
OKEHI	287201	55	0.0508	0.0649	0.7825	17
KABBA BUNU	266176	48	0.0443	0.0602	0.7368	18
OFU	245973	42	0.0388	0.0556	0.6977	19
DEKINA	334237	56	0.0517	0.0755	0.6846	20
OKENE	418292	60	0.0554	0.0945	0.5861	21
Total	**4424998**	**1083**				

Appendix IX:
Data for Education Facilities

LGA	Number of primary sch.	Number of teachers in primary schools	Number of secondary schools.	Number of teachers in secondary schools	Number of Tertiary institutions	% population without formal education	Secondary-school students-teachers' ratio
Adavi	35	195	10	240	-	30	31
Ajaokuta	25	106	18	120	-	45	52
Ankpa	55	192	40	266	1	35	37
Bassa	95	108	50	172	-	40	31
Dekina	102	244	53	325	3	25	28
Ibaji	65	102	55	128	1	43	44
Idah	50	192	45	245	1	32	36
Igalamela	54	108	35	203	2	46	35
Ijumu	70	98	15	168	1	38	41
Kabba/Bunu	63	108	32	188	2	40	38
Kogi	23	61	10	98	-	51	34
Lokoja	102	218	51	388	5	25	59
Mopa-muro	28	55	13	68	-	20	53
Ofu	98	62	21	112	-	27	49
Ogori	15	63	12	86	-	38	38
Okehi	30	111	18	215	-	35	39
Okene	35	120	20	200	2	30	37
Olamaboro	60	113	26	187	2	42	34
Omala	51	102	15	192	2	38	42
Yagba-East	38	79	27	102	1	25	22
Yagba-West	41	75	22	98	1	28	61

Appendix X:
LQ FOR EDUCATION FACILITIES (NUMBER OF PRIMARY SCHOOLS)

LGA	pop.	PRIMARY SCH.	S1/S	N1/N	LQ	RANK
BASSA	179440	95	0.0837	0.0406	2.0641	1
IDAH	102452	50	0.0441	0.0232	1.9027	2
IJUMU	152343	70	0.0617	0.0344	1.7914	3
LOKOJA	252605	102	0.0899	0.0571	1.5743	4
OFU	245973	98	0.0863	0.0556	1.5533	5
IBAJI	163878	65	0.0573	0.0370	1.5464	6
OMALA	138695	51	0.0449	0.0313	1.4336	7
DEKINA	334237	102	0.0899	0.0755	1.1898	8
OLAMABORO	203595	60	0.0529	0.0460	1.1490	9
OGORI	51136	15	0.0132	0.0116	1.1436	10
IGALAMELA	188896	54	0.0476	0.0427	1.1145	11
KABBA BUNU	266176	63	0.0555	0.0602	0.9228	12
ZAGBA-WEST	179750	41	0.0361	0.0406	0.8893	13
ZAGBA-EAST	189658	38	0.0335	0.0429	0.7811	14
MOPA-MORO	144576	28	0.0247	0.0327	0.7551	15
ANKPA	341927	55	0.0485	0.0773	0.6271	16
AJA0KUTA	157275	25	0.0220	0.0355	0.6197	17
KOGI	147856	23	0.0203	0.0334	0.6065	18
ADAVI	279037	35	0.0308	0.0631	0.4890	19
OKEHI	287201	30	0.0264	0.0649	0.4072	20
OKENE	418292	35	0.0308	0.0945	0.3262	21
Total	**4424998**	**1135**				

Appendix XI:

LQ FOR EDUCATION FACILITIES (NUMBER OF TEACHERS IN PRIMARY SCHOOLS)

LGA	pop.	NO OF TEACHER IN PRY SCH.	S1/S	N1/N	LQ	RANK
IDAH	102452	192	0.0764	0.0232	3.3012	1
OGORI	51136	63	0.0251	0.0116	2.1702	2
LOKOJA	252605	218	0.0868	0.0571	1.5202	3
OMALA	138695	102	0.0406	0.0313	1.2955	4
DEKINA	334237	244	0.0971	0.0755	1.2860	5
ADAVI	279037	195	0.0776	0.0631	1.2310	6
AJA0KUTA	157275	106	0.0422	0.0355	1.1872	7
IJUMU	152343	98	0.0390	0.0344	1.1332	8
IBAJI	163878	102	0.0406	0.0370	1.0964	9
BASSA	179440	108	0.0430	0.0406	1.0602	10
IGALAMELA	188896	108	0.0430	0.0427	1.0072	11
ANKPA	341927	192	0.0764	0.0773	0.9891	12
OLAMABORO	203595	113	0.0450	0.0460	0.9777	13
ZAGBA-WEST	179750	75	0.0299	0.0406	0.7350	14
ZAGBA-EAST	189658	79	0.0314	0.0429	0.7338	15
KOGI	147856	61	0.0243	0.0334	0.7267	16
KABBA BUNU	266176	108	0.0430	0.0602	0.7147	17
OKEHI	287201	111	0.0442	0.0649	0.6808	18
MOPA-MORO	144576	55	0.0219	0.0327	0.6701	19
OKENE	418292	120	0.0478	0.0945	0.5054	20
OFU	245973	62	0.0247	0.0556	0.4440	21
Total	**4424998**	**2512**				

Appendix XII:

LQ FOR EDUCATION FACILITIES (NUMBER OF SECONDARY SCHOOLS)

LGA	pop.	NO OF SEC SCH.	S1/S	N1/N	LQ	RANK
IDAH	102452	45	0.0746	0.0232	3.2232	1
IBAJI	163878	55	0.0912	0.0370	2.4628	2
BASSA	179440	50	0.0829	0.0406	2.0448	3
OGORI	51136	12	0.0199	0.0116	1.7221	4
LOKOJA	252605	51	0.0846	0.0571	1.4816	5
IGALAMELA	188896	35	0.0580	0.0427	1.3597	6
KOGI	147856	25	0.0415	0.0334	1.2408	7
DEKINA	334237	53	0.0879	0.0755	1.1636	8
ZAGBA-EAST	189658	27	0.0448	0.0429	1.0447	9
OLAMABORO	203595	26	0.0431	0.0460	0.9371	10
ZAGBA-WEST	179750	22	0.0365	0.0406	0.8982	11
KABBA BUNU	266176	32	0.0531	0.0602	0.8822	12
ANKPA	341927	40	0.0663	0.0773	0.8585	13
AJA0KUTA	157275	18	0.0299	0.0355	0.8399	14
OMALA	138695	15	0.0249	0.0313	0.7936	15
IJUMU	152343	15	0.0249	0.0344	0.7225	16
MOPA-MORO	144576	13	0.0216	0.0327	0.6598	17
OFU	245973	21	0.0348	0.0556	0.6265	18
OKEHI	287201	18	0.0299	0.0649	0.4599	19
OKENE	418292	20	0.0332	0.0945	0.3509	20
ADAVI	279037	10	0.0166	0.0631	0.2630	21
Total	**4424998**	**603**				

Appendix XIII:

LQ FOR EDUCATION FACILITIES (NUMBER OF TEACHER IN SECONDARY SCHOOLS)

L.G.A.	pop.	NO OF TEACHERS IN SEC SCH.	S1/S	N1/N	LQ	RANK
IDAH	102452	245	0.064457	0.023153	2.783946	1
OGORI	51136	86	0.022626	0.011556	1.957884	2
LOKOJA	252605	388	0.102078	0.057086	1.788154	3
OMALA	138695	192	0.050513	0.031344	1.611594	4
IJUMU	152343	168	0.044199	0.034428	1.283814	5
IGALAMELA	188896	203	0.053407	0.042688	1.25109	6
DEKINA	334237	325	0.085504	0.075534	1.131994	7
BASSA	179440	172	0.045251	0.040551	1.115898	8
OLAMABORO	203595	187	0.049198	0.04601	1.069276	9
ADAVI	279037	240	0.063141	0.063059	1.001301	10
IBAJI	163878	128	0.033675	0.037035	0.909294	11
ANKPA	341927	266	0.069982	0.077272	0.905656	12
AJA0KUTA	157275	120	0.031571	0.035542	0.888253	13
OKEHI	287201	215	0.056564	0.064904	0.871501	14
KABBA BUNU	266176	188	0.049461	0.060153	0.822251	15
KOGI	147856	98	0.025783	0.033414	0.771618	16
ZAGBA-WEST	179750	98	0.025783	0.040621	0.634706	17
ZAGBA-EAST	189658	102	0.026835	0.042861	0.626101	18
OKENE	418292	200	0.052618	0.094529	0.556629	19
MOPA-MORO	144576	68	0.01789	0.032673	0.547555	20
OFU	245973	112	0.029466	0.055587	0.530085	21
Total	**4424998**	**3801**				

Appendix XIV:

LQ FOR EDUCATION FACILITIES (NUMBER OF TERTIARY INSTITUTION)

LGA	pop.	NO OF TERTIARY	S1/S	N1/N	LQ	RANK
LOKOJA	252605	5	0.2000	0.0571	3.5035	1
OMALA	138695	2	0.0800	0.0313	2.5524	2
IGALAMELA	188896	2	0.0800	0.0427	1.8740	3
OLAMABORO	203595	2	0.0800	0.0460	1.7387	4
IDAH	102452	1	0.0400	0.0232	1.7276	5
DEKINA	334237	3	0.1200	0.0755	1.5887	6
KABBA BUNU	266176	2	0.0800	0.0602	1.3299	7
OKENE	418292	3	0.1200	0.0945	1.2694	8
IJUMU	152343	1	0.0400	0.0344	1.1619	9
IBAJI	163878	1	0.0400	0.0370	1.0801	10
ZAGBA-WEST	179750	1	0.0400	0.0406	0.9847	11
ZAGBA-EAST	189658	1	0.0400	0.0429	0.9333	12
ANKPA	341927	1	0.0400	0.0773	0.5177	13
ADAVI	279037	0	0.0000	0.0631	0	
AJA0KUTA	157275	0	0.0000	0.0355	0	
BASSA	179440	0	0.0000	0.0406	0	
KOGI	147856	0	0.0000	0.0334	0	
MOPA-MORO	144576	0	0.0000	0.0327	0	
OFU	245973	0	0.0000	0.0556	0	
OGORI	51136	0	0.0000	0.0116	0	
OKEHI	287201	0	0.0000	0.0649	0	
Total	**4424998**	**25**				

Appendix XV:

LQ FOR EDUCATION FACILITIES (SECONDARY SCHOOL STUDENT - TEACHER RATIO)

Communication	pop.	Student/Teacher Ratio	S1/S	N1/N	LQ	RANK
OGORI	51136	38	0.0451	0.0116	3.9053	1
MOPA-MORO	144576	53	0.0629	0.0327	1.9266	2
IDAH	102452	36	0.0428	0.0232	1.8466	3
ZAGBA-WEST	179750	61	0.0724	0.0406	1.7835	4
AJA0KUTA	157275	52	0.0618	0.0355	1.7376	5
OMALA	138695	42	0.0499	0.0313	1.5914	6
IJUMU	152343	42	0.0499	0.0344	1.4489	7
IBAJI	163878	44	0.0523	0.0370	1.4110	8
LOKOJA	252605	59	0.0701	0.0571	1.2275	9
KOGI	147856	34	0.0404	0.0334	1.2085	10
OFU	245973	49	0.0582	0.0556	1.0469	11
IGALAMELA	188896	35	0.0416	0.0427	0.9737	12
BASSA	179440	31	0.0368	0.0406	0.9079	13
OLAMABORO	203595	34	0.0404	0.0460	0.8776	14
KABBA BUNU	266176	38	0.0451	0.0602	0.7503	15
OKEHI	287201	39	0.0463	0.0649	0.7136	16
ZAGBA-EAST	189658	22	0.0261	0.0429	0.6096	17
ADAVI	279037	31	0.0368	0.0631	0.5838	18
ANKPA	341927	37	0.0439	0.0773	0.5687	19
OKENE	418292	37	0.0439	0.0945	0.4649	20
DEKINA	334237	28	0.0333	0.0755	0.4403	21
Total	**4424998**	**842**				

Appendix XVI:

DATA FOR COMMERCE AND TRADE

LGA	Number of markets	Number of banks	Number of coop erative societies	Number of com munity develop- ment organisati- ons.
Adavi	21	05	16	16
Ajaokuta	12	04	06	11
Ankpa	38	12	18	22
Bassa	40	10	12	20
Dekina	45	18	25	19
Ibaji	30	06	10	14
Idah	28	10	15	12
Igalamela	38	09	15	18
Ijumu	16	06	12	15
Kabba/Bunu	25	08	16	21
Kogi	12	03	06	13
Lokoja	15	15	23	50
Mopa-muro	08	04	08	12
Ofu	22	07	11	11
Ogori	08	04	06	19
Okehi	18	09	18	14
Okene	30	10	20	18
Olamaboro	38	06	18	23
Omala	22	10	16	16
Yagba-East	15	08	15	10
Yagba-West	18	10	14	12

Appendix XVII:

LQ FOR COMMERCE AND TRADE (NUMBER OF MARKETS FACILITIES)

LGA	**pop.**	**No of Market**	**S1/S**	**N1/N**	**LQ**	**RANK**
IDAH	102452	28	0.0561	0.0232	2.4230	1
BASSA	179440	40	0.0802	0.0406	1.9768	2
IGALAMELA	188896	38	0.0762	0.0427	1.7839	3
OLAMABORO	203595	38	0.0762	0.0460	1.6551	4
IBAJI	163878	30	0.0601	0.0370	1.6234	5
OMALA	138695	22	0.0441	0.0313	1.4066	6
OGORI	51136	8	0.0160	0.0116	1.3873	7
DEKINA	334237	45	0.0902	0.0755	1.1939	8
ANKPA	341927	38	0.0762	0.0773	0.9855	9
IJUMU	152343	16	0.0321	0.0344	0.9313	10
ZAGBA-WEST	179750	18	0.0361	0.0406	0.8880	11
KABBA BUNU	266176	25	0.0501	0.0602	0.8329	12
OFU	245973	22	0.0441	0.0556	0.7931	13
KOGI	147856	12	0.0240	0.0334	0.7197	14
ZAGBA-EAST	189658	15	0.0301	0.0429	0.7013	15
AJA0KUTA	157275	12	0.0240	0.0355	0.6766	16
ADAVI	279037	21	0.0421	0.0631	0.6674	17
OKENE	418292	30	0.0601	0.0945	0.6360	18
OKEHI	287201	18	0.0361	0.0649	0.5558	19
LOKOJA	252605	15	0.0301	0.0571	0.5266	20
MOPA-MORO	144576	8	0.0160	0.0327	0.4907	21
Total	**4424998**	**499**				

Appendix XVIII:

LQ FOR COMMERCE AND TRADE (NUMBER OF BANKS)

LGA	Pop.	Banks	S1/S	N1/N	LQ	RANK
IDAH	102452	10	0.0575	0.0232	2.4822	1
OGORI	51136	4	0.0230	0.0116	1.9893	2
OMALA	138695	10	0.0575	0.0313	1.8336	3
LOKOJA	252605	15	0.0862	0.0571	1.5101	4
BASSA	179440	10	0.0575	0.0406	1.4172	5
ZAGBA-WEST	179750	10	0.0575	0.0406	1.4148	6
DEKINA	334237	18	0.1034	0.0755	1.3696	7
IGALAMELA	188896	9	0.0517	0.0427	1.2117	8
YAGBA-EAST	189658	8	0.0460	0.0429	1.0727	9
IJUMU	152343	6	0.0345	0.0344	1.0016	10
IBAJI	163878	6	0.0345	0.0370	0.9311	11
ANKPA	341927	12	0.0690	0.0773	0.8925	12
OKEHI	287201	9	0.0517	0.0649	0.7969	13
KABBA BUNU	266176	8	0.0460	0.0602	0.7643	14
OLAMABORO	203595	6	0.0345	0.0460	0.7495	15
OFU	245973	7	0.0402	0.0556	0.7237	16
MOPA-MORO	144576	4	0.0230	0.0327	0.7036	17
AJA0KUTA	157275	4	0.0230	0.0355	0.6468	18
OKENE	418292	10	0.0575	0.0945	0.6080	19
KOGI	147856	3	0.0172	0.0334	0.5160	20
ADAVI	279037	5	0.0287	0.0631	0.4557	21
Total	4424998	174				

Appendix XIX:

LQ FOR COMMERCE AND TRADE (NUMBER OF COOPERATIVE SOCIETY)

LGA	pop.	Cooperative societies	S1/S	N1/N	LQ	RANK
IDAH	102452	15	0.0500	0.0232	2.1595	1
OGORI	51136	6	0.0200	0.0116	1.7307	2
OMALA	138695	16	0.0533	0.0313	1.7016	3
LOKOJA	252605	23	0.0767	0.0571	1.3430	4
OLAMABORO	203595	18	0.0600	0.0460	1.3041	5
IGALAMELA	188896	15	0.0500	0.0427	1.1713	6
ZAGBA-EAST	189658	15	0.0500	0.0429	1.1666	7
IJUMU	152343	12	0.0400	0.0344	1.1619	8
ZAGBA-WEST	179750	14	0.0467	0.0406	1.1488	9
DEKINA	334237	25	0.0833	0.0755	1.1033	10
BASSA	179440	12	0.0400	0.0406	0.9864	11
OKEHI	287201	18	0.0600	0.0649	0.9244	12
IBAJI	163878	10	0.0333	0.0370	0.9001	13
KABBA BUNU	266176	16	0.0533	0.0602	0.8866	14
ADAVI	279037	16	0.0533	0.0631	0.8458	15
MOPA-MORO	144576	8	0.0267	0.0327	0.8162	16
ANKPA	341927	18	0.0600	0.0773	0.7765	17
OKENE	418292	20	0.0667	0.0945	0.7052	18
OFU	245973	11	0.0367	0.0556	0.6596	19
KOGI	147856	6	0.0200	0.0334	0.5986	20
AJA0KUTA	157275	6	0.0200	0.0355	0.5627	21
Total	**4424998**	**300**				

Appendix XX:

LQ FOR COMMERCE AND TRADE (NUMBER OF COMMUNITY DEVELOPMENT ORGANISATION)

LGA	pop.	Community Dev.	S1/S	N1/N	LQ	Rank
OGORI	51136	19	0.0519	0.0116	4.4922	1
LOKOJA	252605	50	0.1366	0.0571	2.3931	2
IDAH	102452	12	0.0328	0.0232	1.4161	3
OMALA	138695	16	0.0437	0.0313	1.3947	4
OLAMABORO	203595	23	0.0628	0.0460	1.3658	5
BASSA	179440	20	0.0546	0.0406	1.3475	6
IJUMU	152343	15	0.0410	0.0344	1.1904	7
IGALAMELA	188896	18	0.0492	0.0427	1.1521	8
KOGI	147856	13	0.0355	0.0334	1.0630	9
IBAJI	163878	14	0.0383	0.0370	1.0329	10
MOPA-MORO	144576	12	0.0328	0.0327	1.0035	11
KABBA BUNU	266176	21	0.0574	0.0602	0.9539	12
AJA0KUTA	157275	11	0.0301	0.0355	0.8456	13
ZAGBA-WEST	179750	12	0.0328	0.0406	0.8071	14
ANKPA	341927	22	0.0601	0.0773	0.7779	15
ADAVI	279037	16	0.0437	0.0631	0.6933	16
DEKINA	334237	19	0.0519	0.0755	0.6873	17
ZAGBA-EAST	189658	10	0.0273	0.0429	0.6375	18
OKEHI	287201	14	0.0383	0.0649	0.5894	19
OFU	245973	11	0.0301	0.0556	0.5407	20
OKENE	418292	18	0.0492	0.0945	0.5203	21
Total	**4424998**	**366**				

Appendix XXI:
DATA FOR HEALTH CARE FACILITIES

LGA	Number of healthcare facilities	Number of hospital beds	Number of medical doctors	Number of nurses/mid-wives	Number of pharmacists
Adavi	32	216	2	8	2
Ajaokuta	25	200	2	12	1
Ankpa	46	261	3	10	5
Bassa	95	300	6	11	6
Dekina	139	322	8	20	10
Ibaji	42	206	3	12	1
Idah	44	186	3	16	8
Igalamela	73	222	5	14	6
Ijumu	37	201	2	12	3
Kabba/Bunu	39	198	2	15	5
Kogi	33	195	1	4	2
Lokoja	52	225	7	22	15
Mopa-muro	23	172	2	6	1
Ofu	78	286	3	8	5
Ogori	11	88	1	4	3
Okehi	24	170	4	12	6
Okene	47	193	4	15	10
Olamaboro	90	205	5	15	8
Omala	33	165	4	12	8
Yagba-East	35	120	2	11	3
Yagba-West	23	130	3	10	2

Appendix XXII:
LQ FOR HEALTH CARE AND SANITATION (NUMBER OF HEALTH CARE CENTRES)

LGA	pop.	Health Centers	S1/S	N1/N	LQ	RANK
BASSA	179440	95	0.0930	0.0406	2.2945	1
OLAMABORO	203595	90	0.0881	0.0460	1.9159	2
IDAH	102452	44	0.0431	0.0232	1.8613	3
DEKINA	334237	139	0.1361	0.0755	1.8024	4
IGALAMELA	188896	73	0.0715	0.0427	1.6749	5
OFU	245973	78	0.0764	0.0556	1.3743	6
IBAJI	163878	42	0.0411	0.0370	1.1107	7
IJUMU	152343	37	0.0362	0.0344	1.0526	8
OMALA	138695	33	0.0323	0.0313	1.0312	9
KOGI	147856	33	0.0323	0.0334	0.9673	10
OGORI	51136	11	0.0108	0.0116	0.9323	11
LOKOJA	252605	52	0.0509	0.0571	0.8922	12
ZAGBA-EAST	189658	35	0.0343	0.0429	0.7998	13
MOPA-MORO	144576	23	0.0225	0.0327	0.6895	14
AJA0KUTA	157275	25	0.0245	0.0355	0.6889	15
KABBA BUNU	266176	39	0.0382	0.0602	0.6350	16
ANKPA	341927	46	0.0451	0.0773	0.5831	17
ZAGBA-WEST	179750	23	0.0225	0.0406	0.5546	18
ADAVI	279037	32	0.0313	0.0631	0.4970	19
OKENE	418292	47	0.0460	0.0945	0.4870	20
OKEHI	287201	24	0.0235	0.0649	0.3622	21
Total	**4424998**	**1021**				

Appendix XXIII:

LQ FOR HEALTH CARE AND SANITATION (NUMBER OF HOSPITAL BEDS)

LGA	pop.	No of Hospital Bed	S1/S	N1/N	LQ	RANK
IDAH	102452	186	0.0437	0.0232	1.8854	1
OGORI	51136	88	0.0207	0.0116	1.7871	2
BASSA	179440	300	0.0704	0.0406	1.7362	3
IJUMU	152343	201	0.0472	0.0344	1.3702	4
KOGI	147856	195	0.0458	0.0334	1.3696	5
AJA0KUTA	157275	200	0.0469	0.0355	1.3206	6
IBAJI	163878	206	0.0483	0.0370	1.3054	7
MOPA-MORO	144576	172	0.0404	0.0327	1.2355	8
OMALA	138695	165	0.0387	0.0313	1.2354	9
IGALAMELA	188896	222	0.0521	0.0427	1.2205	10
OFU	245973	286	0.0671	0.0556	1.2075	11
OLAMABORO	203595	205	0.0481	0.0460	1.0457	12
DEKINA	334237	322	0.0756	0.0755	1.0005	13
LOKOJA	252605	225	0.0528	0.0571	0.9250	14
ADAVI	279037	216	0.0507	0.0631	0.8039	15
ANKPA	341927	261	0.0613	0.0773	0.7927	16
KABBA BUNU	266176	198	0.0465	0.0602	0.7725	17
ZAGBA-WEST	179750	130	0.0305	0.0406	0.7511	18
ZAGBA-EAST	189658	120	0.0282	0.0429	0.6571	19
OKEHI	287201	170	0.0399	0.0649	0.6147	20
OKENE	418292	193	0.0453	0.0945	0.4792	21

Appendix XXIV:

LQ FOR HEALTH CARE AND SANITATION (NUMBER OF MEDICAL DOCTORS)

LGA	pop.	No of Medical Doctors	S1/S	N1/N	LQ	RANK
OGORI	51136	3	0.0268	0.0116	2.3179	1
IDAH	102452	5	0.0446	0.0232	1.9282	2
BASSA	179440	8	0.0714	0.0406	1.7614	3
OMALA	138695	6	0.0536	0.0313	1.7092	4
IGALAMELA	188896	7	0.0625	0.0427	1.4641	5
OLAMABORO	203595	7	0.0625	0.0460	1.3584	6
IBAJI	163878	5	0.0446	0.0370	1.2054	7
DEKINA	334237	10	0.0893	0.0755	1.1821	8
ZAGBA-WEST	179750	5	0.0446	0.0406	1.0990	9
LOKOJA	252605	7	0.0625	0.0571	1.0948	10
MOPA-MORO	144576	4	0.0357	0.0327	1.0931	11
IJUMU	152343	4	0.0357	0.0344	1.0374	12
AJA0KUTA	157275	4	0.0357	0.0355	1.0048	13
ZAGBA-EAST	189658	4	0.0357	0.0429	0.8333	14
OKEHI	287201	6	0.0536	0.0649	0.8254	15
OFU	245973	5	0.0446	0.0556	0.8031	16
KOGI	147856	3	0.0268	0.0334	0.8016	17
KABBA BUNU	266176	4	0.0357	0.0602	0.5937	18
ANKPA	341927	5	0.0446	0.0773	0.5777	19
OKENE	418292	6	0.0536	0.0945	0.5667	20
ADAVI	279037	4	0.0357	0.0631	0.5664	21
Total	**4424998**	**112**				

Appendix XXV:

LQ FOR HEALTH CARE AND SANITATION (NUMBER OF NURSES)

LGA	pop.	No of Nurses	S1/S	N1/N	LQ	RANK
IDAH	102452	16	0.0643	0.0232	2.7753	1
LOKOJA	252605	22	0.0884	0.0571	1.5477	2
OMALA	138695	12	0.0482	0.0313	1.5376	3
IJUMU	152343	12	0.0482	0.0344	1.3998	4
OGORI	51136	4	0.0161	0.0116	1.3901	5
AJA0KUTA	157275	12	0.0482	0.0355	1.3559	6
IGALAMELA	188896	14	0.0562	0.0427	1.3171	7
OLAMABORO	203595	15	0.0602	0.0460	1.3093	8
IBAJI	163878	12	0.0482	0.0370	1.3013	9
BASSA	179440	11	0.0442	0.0406	1.0894	10
DEKINA	334237	20	0.0803	0.0755	1.0634	11
ZAGBA-EAST	189658	11	0.0442	0.0429	1.0307	12
KABBA BUNU	266176	15	0.0602	0.0602	1.0015	13
ZAGBA-WEST	179750	10	0.0402	0.0406	0.9887	14
OKEHI	287201	12	0.0482	0.0649	0.7425	15
MOPA-MORO	144576	6	0.0241	0.0327	0.7375	16
OKENE	418292	15	0.0602	0.0945	0.6373	17
OFU	245973	8	0.0321	0.0556	0.5780	18
ANKPA	341927	10	0.0402	0.0773	0.5197	19
ADAVI	279037	8	0.0321	0.0631	0.5095	20
KOGI	147856	4	0.0161	0.0334	0.4808	21
Total	4424998	249				

Appendix XXVI:

LQ FOR HEALTH CARE AND SANITATION (NUMBER OF PHARMACISTS)

LGA	**pop.**	**No of pharmacist**	**S1/S**	**N1/N**	**LQ**	**RANK**
IDAH	102452	8	0.0727	0.0232	3.1412	1
LOKOJA	252605	15	0.1364	0.0571	2.3887	2
OGORI	51136	3	0.0273	0.0116	2.3600	3
OMALA	138695	8	0.0727	0.0313	2.3203	4
OLAMABORO	203595	8	0.0727	0.0460	1.5807	5
BASSA	179440	6	0.0545	0.0406	1.3451	6
IGALAMELA	188896	6	0.0545	0.0427	1.2778	7
DEKINA	334237	10	0.0909	0.0755	1.2036	8
OKENE	418292	10	0.0909	0.0945	0.9617	9
OKEHI	287201	6	0.0545	0.0649	0.8404	10
OFU	245973	5	0.0455	0.0556	0.8177	11
IJUMU	152343	3	0.0273	0.0344	0.7922	12
KABBA BUNU	266176	5	0.0455	0.0602	0.7557	13
ZAGBA-EAST	189658	3	0.0273	0.0429	0.6363	14
ANKPA	341927	5	0.0455	0.0773	0.5882	15
KOGI	147856	2	0.0182	0.0334	0.5441	16
ZAGBA-WEST	179750	2	0.0182	0.0406	0.4476	17
ADAVI	279037	2	0.0182	0.0631	0.2883	18
MOPA-MORO	144576	1	0.0091	0.0327	0.2782	19
AJA0KUTA	157275	1	0.0091	0.0355	0.2558	20
IBAJI	163878	1	0.0091	0.0370	0.2455	21
Total	**4424998**	**110**				

Appendix XXVII:
DATA FOR INDUSTRIES

LGA	Number of local craft industries	Number of manufac-turing industries	% of people employed in industries
Adavi	14	05	12
Ajaokuta	21	10	10
Ankpa	15	13	21
Bassa	25	14	30
Dekina	20	12	60
Ibaji	18	08	18
Idah	15	07	23
Igalamela	12	06	20
Ijumu	15	12	16
Kabba/Bunu	18	14	15
Kogi	16	09	11
Lokoja	13	10	40
Mopa-muro	12	02	9
Ofu	14	08	19
Ogori	15	09	14
Okehi	20	10	12
Okene	16	11	18
Olamaboro	14	06	22
Omala	13	07	12
Yagba-East	12	03	15
Yagba-West	10	04	13

Appendix XXVIII:
LQ FOR INDUSTRIES (NUMBER OF LOCAL CRAFT INDUSTRIES)

LGA	pop.	Craft Industry	S1/S	N1/N	LQ	RANK
OGORI	51136	15	0.0457	0.0116	3.9573	1
IDAH	102452	15	0.0457	0.0232	1.9752	2
BASSA	179440	25	0.0762	0.0406	1.8796	3
AJA0KUTA	157275	21	0.0640	0.0355	1.8014	4
IBAJI	163878	18	0.0549	0.0370	1.4818	5
KOGI	147856	16	0.0488	0.0334	1.4599	6
IJUMU	152343	15	0.0457	0.0344	1.3283	7
OMALA	138695	13	0.0396	0.0313	1.2645	8
MOPA-MORO	144576	12	0.0366	0.0327	1.1198	9
OKEHI	287201	20	0.0610	0.0649	0.9395	10
OLAMABORO	203595	14	0.0427	0.0460	0.9277	11
KABBA BUNU	266176	18	0.0549	0.0602	0.9123	12
IGALAMELA	188896	12	0.0366	0.0427	0.8570	13
ZAGBA-EAST	189658	12	0.0366	0.0429	0.8536	14
DEKINA	334237	20	0.0610	0.0755	0.8073	15
OFU	245973	14	0.0427	0.0556	0.7679	16
ZAGBA-WEST	179750	10	0.0305	0.0406	0.7505	17
LOKOJA	252605	13	0.0396	0.0571	0.6943	18
ADAVI	279037	14	0.0427	0.0631	0.6769	19
ANKPA	341927	15	0.0457	0.0773	0.5918	20
OKENE	418292	16	0.0488	0.0945	0.5160	21
Total	4424998	328				

Appendix XXIX:

LQ FOR INDUSTRIES (NUMBER OF MANUFACTURING INDUSTRIES)

L.G.A.	pop.	Manufacturing industry	S1/S	N1/N	LQ	RANK
OGORI	51136	9	0.0500	0.0116	4.3267	1
IJUMU	152343	12	0.0667	0.0344	1.9364	2
BASSA	179440	14	0.0778	0.0406	1.9180	3
IDAH	102452	7	0.0389	0.0232	1.6796	4
AJA0KUTA	157275	10	0.0556	0.0355	1.5631	5
KOGI	147856	9	0.0500	0.0334	1.4964	6
KABBA BUNU	266176	14	0.0778	0.0602	1.2930	7
OMALA	138695	7	0.0389	0.0313	1.2407	8
IBAJI	163878	8	0.0444	0.0370	1.2001	9
LOKOJA	252605	10	0.0556	0.0571	0.9732	10
ANKPA	341927	13	0.0722	0.0773	0.9347	11
DEKINA	334237	12	0.0667	0.0755	0.8826	12
OKEHI	287201	10	0.0556	0.0649	0.8560	13
OFU	245973	8	0.0444	0.0556	0.7995	14
IGALAMELA	188896	6	0.0333	0.0427	0.7809	15
OLAMABORO	203595	6	0.0333	0.0460	0.7245	16
OKENE	418292	11	0.0611	0.0945	0.6465	17
ZAGBA-WEST	179750	4	0.0222	0.0406	0.5471	18
ADAVI	279037	5	0.0278	0.0631	0.4405	19
ZAGBA-EAST	189658	3	0.0167	0.0429	0.3889	20
MOPA-MORO	144576	2	0.0111	0.0327	0.3401	21
Total	4424998	180				

Appendix XXX:

LQ FOR INDUSTRIES (NUMBER OF PEOPLE EMPLOYED IN THE INDUSTRIES)

LGA	pop.	% people employed	S1/S	N1/N	LQ	RANK
OGORI	51136	14	0.0341	0.0116	2.9548	1
IDAH	102452	23	0.0561	0.0232	2.4229	2
DEKINA	334237	60	0.1463	0.0755	1.9374	3
BASSA	179440	30	0.0732	0.0406	1.8044	4
LOKOJA	252605	40	0.0976	0.0571	1.7090	5
IBAJI	163878	18	0.0439	0.0370	1.1854	6
OLAMABORO	203595	22	0.0537	0.0460	1.1662	7
IGALAMELA	188896	20	0.0488	0.0427	1.1427	8
IJUMU	152343	16	0.0390	0.0344	1.1335	9
OMALA	138695	12	0.0293	0.0313	0.9338	10
ZAGBA-EAST	189658	15	0.0366	0.0429	0.8536	11
OFU	245973	19	0.0463	0.0556	0.8337	12
KOGI	147856	11	0.0268	0.0334	0.8029	13
ZAGBA-WEST	179750	13	0.0317	0.0406	0.7806	14
AJA0KUTA	157275	10	0.0244	0.0355	0.6862	15
MOPA-MORO	144576	9	0.0220	0.0327	0.6719	16
ANKPA	341927	21	0.0512	0.0773	0.6628	17
KABBA BUNU	266176	15	0.0366	0.0602	0.6082	18
OKENE	418292	18	0.0439	0.0945	0.4644	19
ADAVI	279037	12	0.0293	0.0631	0.4641	20
OKEHI	287201	12	0.0293	0.0649	0.4509	21
Total	4424998	410				

Appendix XXXI:

The correlation matrix of the socio-economic variables

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X19	X20	X21	X22	X23
X1	1.00																						
X2	.345	1.00																					
X3	.225	.147	1.00																				
X4	.203	.043	.815	1.00																			
X5	.221	.170	.656	.712	1.00																		
X6	.265	.225	.457	.574	.574	1.00																	
X7	.354	.208	.410	.405	.450	.656	1.00																
X8	.066	.067	.541	.510	.518	.485	.362	1.00															
X9	.227	.120	.610	.583	.483	.397	.257	.663	1.00														
X10	.165	.181	.622	.619	.537	.455	.305	.519	.639	1.00													
X11	.090	.243	.502	.539	.400	.375	.256	.404	.469	.626	1.00												
X12	.131	.422	.239	.208	.208	.176	.169	.143	.118	.404	.422	1.00											
X13	.171	.249	.275	.279	.166	.219	.183	.199	.248	.342	.321	.637	1.00										
X14	.358	.264	.580	.466	.483	.377	.447	.448	.577	.481	.373	.391	.426	1.00									
X15	.193	.181	.475	.411	.392	.358	.397	.392	.424	.461	.295	.220	.151	.583	1.00								
X16	.281	.601	.040	-.013	.126	.157	.296	-.095	-.057	.189	.149	.332	.171	.132	.289	1.00							
X17	.318	.361	.357	.355	.305	.304	.298	.162	.254	.438	.321	.312	.322	.275	.317	.520	1.00						
X18	.228	.336	.338	.413	.401	.329	.224	.218	.265	.505	.396	.344	.397	.161	.234	.481	.717	1.00					
X19	.249	.228	.506	.590	.529	.439	.345	.437	.480	.506	.417	.225	.333	.315	.212	.222	.472	.635	1.00				
X20	.239	.112	.397	.496	.481	.424	.422	.459	.407	.430	.272	.055	.157	.240	.186	.063	.267	.455	.720	1.00			
X21	.260	.232	-.107	-.040	.109	.157	.183	.100	.065	.163	.152	.174	.237	.044	.065	.317	.267	.345	.200	.249	1.00		
X22	.286	.229	-.103	-.084	.047	.016	.050	-.028	.021	.171	.122	.144	.178	-.003	-.025	.330	.255	.367	.105	.021	.584	1.00	
X23	.305	.129	.133	.132	.251	.120	.092	.133	.139	.314	.092	.161	.141	.196	.086	.226	.240	.291	.138	.099	.318	.696	1.00