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Determinants and Influence of Drivers of Growth in the Emerging Urban System of Vandeikya Local Government Region of Benue State, Nigeria

Daniel Peverga Dam

Lecturer, Department of Geography,
Benue State University, Makurdi, Nigeria

Daniel Serki Ortserga

Lecturer, Department of Geography,
Benue State University, Makurdi, Nigeria

Godwin Mbatsavbee Kwanga

Lecturer, Department of Geography,
Benue State University, Makurdi, Nigeria

Timothy Terver Gyuse

Professor Emeritus, Department of Urban and Regional Planning,
Benue State University Makurdi, Nigeria

Abstract:

Most studies on urban system tend to focus more on bigger cities and towns at the upper levels of national and global urban hierarchies neglecting the emerging urban system at the lower levels in the hierarchy. This study set out to determine and assesses the influence of drivers of growth in the emerging urban systems of Vandeikya local government region of Nigeria. Data was collected on 52 central place functions in 67 settlements through physical enumeration and analysed using descriptive statistics and principal component analysis. The result of the study identified four drivers of growth within settlements in the emerging urban system accounting for 86.836% of the total variance within the data set. The result also shows that level of influence of the four drivers of growth vary among settlements in the study area; and the availability of non-agricultural functions constitute these drivers of growth and catalyst for transforming the rural settlements into urban in the study area. However, there is wide development gap among these set of settlements as observed by the wide range of scores associated with each components. Based on the findings, the study recommends development planning that will ensure a balanced and coordinated socio-economic development of the region.

Keywords: Urban systems, Urbanisation, drivers of growth, Vandeikya, Nigeria

1. Introduction

The increasing rate of urbanisation world over has resulted in the formation of urban systems with different structures and characteristics in regions that were completely rural for most of their history. The United Nations Centre for Human Settlements 'UNCHS' (2001) noted that the growth and urbanisation of areas which were hitherto mainly rural is now irreversible. Around the world, societies are being transformed from being predominantly rural to becoming urban. For the first time in history, more than half of the world's population (54% as at 2014) now lives in urban areas as against only 30 per cent in 1950. It is expected that in the next decades to come further profound changes will be experienced in the size and spatial distribution of urban settlements across the globe. As a result, the world's population is projected to be 66 per cent urban in the year 2050. The same projection indicates that nearly 90 per cent of the population increase will be concentrated in Asia and Africa, and the greater percentage of this growth will occur in formerly rural settlements and smaller towns rather than in mega-cities (Cohen, 2006; United Nations, Department of Economic and Social Affairs Population Division, 2014).

Small towns and market centres form a critical factor in development of any region and plays important role in economic development as they provide economies of scale, agglomeration, and localisation as well as efficient infrastructure and services which serve not only their inhabitants but also the surrounding regions (The Global Urban Economic Dialogue Series, 2011). Studies of urban systems conducted by different scholars including Friedmann (1986), Sassen (1994, 2001) and Taylor (2004) tends to lay more emphasis on the upper end of the urban hierarchy (global cities) rather than on smaller urban places at the lower end of the hierarchy. The notion of global cities has taken on a major degree of importance with evidence of documented characteristics of global cities as well as the growth and decline of individual cities in the context of globalisation. Other issues addressed include making comparison between global cities in

terms of competitiveness, city size, economic structural and functional characteristics as well as analysing the spatial concentration of economic activities (economic of scale and agglomerations) at the top of national urban hierarchies

However, the reality in most countries particularly in developing countries suggests that, their urbanisation process has not yet produced the so-called global cities at the top of urban hierarchy but rather it is resulting to emergence of new urban settlements that represent the lower end of the hierarchy (Dam & Gyuse 2015). This has led to formation of urban systems at the lower end of urban hierarchy in different regions that needs to be studied so that their structure and characteristics would be understood for enhance socio-economic development. Nigeria as one of the most rapidly growing country in Sub-Saharan Africa has been experiencing the phenomenon of urbanisation as many other developing countries, but its experience has been unique in scale and structure. For instance, the structure of urbanisation in most African countries has been dominated by the growth of a single primate city usually the political and commercial centre of the nation. Unlike most other nations however, Nigeria has not just one or two but several other cities of major sizes and importance. In two regions, the South-Western and the far Northern areas of Nigeria, there were a number of urban settlements such as Ibadan, Ogbomoso, Kano, Sokoto that were part of urban systems in these regions with a historical roots stretching back considerably before the advent of British colonial rule, giving them distinctive functional, structural, socio-cultural and political identities (Mabogunje 1968).

However, many areas in the North-Central Nigeria particularly in Benue state, there was no urban settlement before the colonial period and even after independence, the region has low level of urbanisation (Dam, Iorliam, Kwaghsende, Anule, Mngutyo. Atser. Adaaku, Alaci, Ujoh, & Gyuse 2020, Dam & Gyuse 2015). Ofem (2012) has observed that the desire of people to be part of the development process in Nigeria has led to the rapid clustering of people and economic activities at settlements originally known to be rural. These settlements are rapidly growing and offering services to their hinterlands by meeting most of their service needs. This has created opportunity for such settlements to be incorporated into the regional development matrix; their structure studied and understood so that their growth can be managed sustainably. This means infrastructure and other services can be provided to prevent future chaos. The growing number of these settlements in Vandeikya Local Government Area (LGA) of Benue state, their networks and relationships present an interesting scenario of an emerging urban system in developing countries that need to be researched and understood. This paper attempts to empirically determine the drivers of growth in settlements of the emerging urban system of Vandeikya local government region, and also evaluates the performance of settlements on the identified drivers in the study area.

2. Study Area and Methodology

Vandeikya Local Government Area (LGA) is located between latitudes $6^{\circ} 33'$ and $7^{\circ} 03'$ North and longitudes $8^{\circ} 48'$ and $9^{\circ} 04'$ East in southern part of Benue State, Nigeria. The local government is bordered on the east by Kwande LGA, on the north by Ushongo LGA, on the west by Konshisha LGA and in the south by Cross River State. It has a total landmass of 1021 square kilometres (Figure 1). Vandeikya Local Government Area was created in 1976 out of Gboko Local Government Area. The LGA presently has 12 Council Wards which include Township, Mbakaange, Mbayongo, Ningev, Mbanyumangbagh, Mbatyough, Mbagbera, Mbajor, Tsambe, Mbadede, Mbagbam and Mbakyaha.

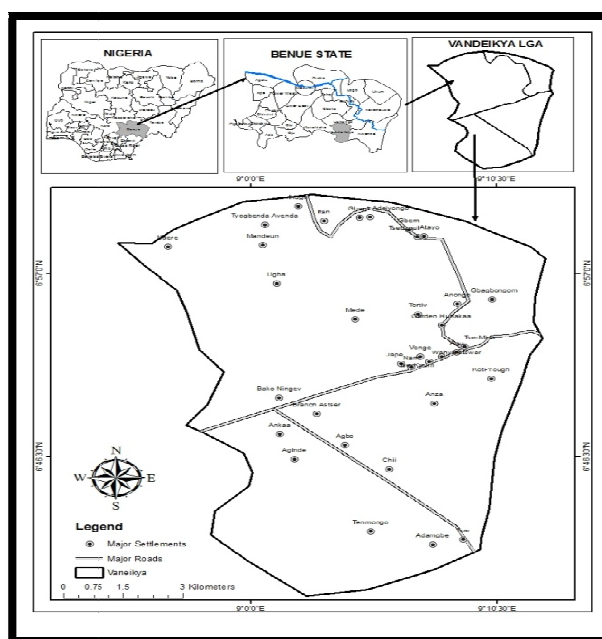


Figure 1: Map of Benue State Showing Vandeikya Local Government Area
Source: GIS Laboratory, Geography Department, Benue State University, Makurdi 2020

The population of the LGA varies over time in terms of size and structure. According to the 2006 Census result, the LGA has a total population size of 234,567 people with an average population density of 230 persons per square kilometre (NPC, 2009). Using the 2006 population figure as a baseline with 3.0 per cent exponential growth rate as generated by

NPC through cohort component population projection method, Tser (2013) has projected population of Vandeikya LGA to be 315, 237 people in 2016. The pattern of settlements in the study area is multi-dimensional. It consist of dispersed pattern particularly in the rural areas such as Gube on one hand, and the feature of nucleation which is conspicuous particularly in the larger settlements such as Agbo, Ihugh, Tsar, Koti-Yough, Adamgbe, Bako-Ningev just to mention a few, on the other hand.

This study used survey research design and acquired data on central place functions offered in settlements of the study area hence there were no existing records of such. Unlike in most of the advanced countries, government agencies and private companies maintains an up-to-date records of all socio-economic functions in their settlements. In such countries, researchers need not to conduct an enumeration again but only make use of the documented data for their research. However, this is not the case in Nigeria and particularly in the study area. Recorded data on socio-economic functions of settlements was not available. The Benue State Ministry of Commerce and Industries, State Economic Planning Commission and the Board of Internal Revenue Services that would have kept records of all socio-economic activities in settlements across the state did not have such records. The only option available to the researcher was to do a physical count (enumeration) of socio-economic activities in each of the settlements in the study area. This study therefore, undertook physical enumeration of functions in all the 67 settlements under study with the aid of seven (7) research assistants. The research assistants were trained for this task. In order to avoid double counting in each settlement, the enumeration was done street by street until the entire settlement was completely captured. However, the enumerations were conducted outside the periodic market days of these settlements since it was extremely difficult to enumerate on market days. The data collected was analysed using descriptive and multivariate statistics including principal component analysis and cluster analysis respectively.

3. Result and Discussions

The study sought to identify drivers of growth within settlements in the emerging urban system of the study area. A total of 52 different central place functions (herein called variables) were found in the study area with variation across settlements. These variables were subjected to principal component analysis (PCA) in order to reduce the dimensionality of the dataset. The result of the preliminary analysis and descriptive statistics of the distribution of these variables in terms of their means and standard deviations is presented in Table 1.

Functions	Mean	Std. Deviation	Functions	Mean	Std. Deviation
Abattoir	.18	.386	Motor Parks/Garages	.19	.701
Agro-Chemical Stores	1.00	4.930	Newspaper Stands	.04	.367
Automated Teller Machine	.09	.733	Nursery Primary Schools	2.69	3.258
Book Shops	.13	.489	Periodic Markets	.76	.430
Boutique Shops	.54	2.883	Pharmaceutical/Medicine Shops	2.19	5.100
Building Material Shops	.64	2.485	Photo Video Studios	.51	1.235
Car Wash Services	.13	.716	Security Outfits	1.10	.431
Carpentry Work Shops	2.10	3.862	Post Office/Postal Agency	.01	.122
Cement Stores	.61	2.117	Hospitals/Health Centres	1.28	2.575
Religious Worship Centres	4.21	4.708	Printing/Computer Business Centres	.57	2.324
Film Viewing Halls	.78	1.423	Provision Stores	11.10	27.766
Refrigerated Warehouse	.13	.489	Public Cemetery	.03	.171
Commercial Bank PLC	.01	.122	Public Power Supply	.12	.327
Cooking Utensil Shops	.22	.951	Restaurants	7.93	19.728
Cyber Café	.19	1.118	Milling/Grinding Machines	3.06	5.763
Daily Market	.25	.438	Secondary Schools	1.36	2.644
Electrical/Electronic Shops	.76	2.960	Shoe Marker/Mender Shops	.91	2.165
Filling Stations	1.06	3.109	Table/Sachet Water Factory	.03	.171
Hair Dressing/Barbing Salons	3.61	9.847	Tailoring Shops	4.30	10.923
Public Water Supply	1.90	2.647	Telecommunication Masts	.22	.735
Guests Houses/Hotels	.31	1.157	Tertiary Institutions	.12	.409
Laundry Services	.13	.548	Timber Shops	.30	1.393
Mechanic Workshops	4.30	11.932	Law Court	.07	.401
Metal Fabrication Workshops	1.36	5.273	Phone Charging Shop	2.15	1.726
Thriffs and Cooperatives	2.16	2.689	Foam/Matresses Shop	.39	2.139
Mortuary	.10	.431	L.G. Council Hall	.19	.500

Table 1: The Distribution of Functions' Mean and Standard Deviation

Source: Author's Fieldwork, 2016

The information in table 1 shows that many of the variables have high mean, which implies that the functions are available in the emerging urban system of the study area. The communalities which show the importance and appropriateness of variables in the analysis indicates high scores for the variables with only 1 out of the 52 variables possessing low communality score of below 0.05 as shown in Table 2

Functions	Initial	Extraction	Functions	Initial	Extraction
Abattoir	1.000	.645	Motor Parks/Garages	1.000	.932
Agro-ChemicalStores	1.000	.961	NewspaperStands	1.000	.991
AutomatedTeller Machine	1.000	.991	NurseryPrimarySchools	1.000	.891
BookShops	1.000	.847	PeriodicMarkets	1.000	.697
BoutiqueShops	1.000	.966	Pharmaceutical/ MedicineShops	1.000	.977
BuildingMaterialShops	1.000	.919	Photo/VideoStudios	1.000	.816
CarWashServices	1.000	.965	SecurityOutfits	1.000	.747
Carpentry Workshops	1.000	.949	PostOffice/PostalAgency	1.000	.991
CementStores	1.000	.976	Hospitals/HealthCentres	1.000	.835
ReligiousWorship Centres	1.000	.927	Printing/ComputerBusin essCentres	1.000	.950
FilmViewingHalls	1.000	.880	ProvisionStores	1.000	.979
Refrigerated Warehouse	1.000	.948	Public Cemetery	1.000	.622
CommercialBankPLC	1.000	.991	PublicPowerSupply	1.000	.765
CookingUtensilShops	1.000	.916	Restaurants	1.000	.974
Cyber Café	1.000	.984	Milling/GrindingMachine s	1.000	.915
DailyMarket	1.000	.594	SecondarySchools	1.000	.897
Electrical/Electronic Shops	1.000	.954	Shoe Marker/MenderShops	1.000	.847
FillingStations	1.000	.966	Table/SachetWaterFacto ry	1.000	.548
Hair Dressing/Barbing Salons	1.000	.945	TailoringShops	1.000	.968
PublicWaterSupply	1.000	.770	TelecommunicationMasts	1.000	.779
Guests Houses/Hotels	1.000	.944	Tertiary Institutions	1.000	.440
LaundryServices	1.000	.941	TimberShops	1.000	.911
MechanicWorkshops	1.000	.976	LawCourt	1.000	.916
Metal FabricationWorkshops	1.000	.953	PhoneChargingShop	1.000	.707
Thrifts andCooperatives	1.000	.725	Foam/MatrassesShop	1.000	.963
Mortuary	1.000	.734	L.G. CouncilHall	1.000	.730

*Table2: Communalities of Functions in the Emerging Urban System of Study Area
Extraction Method: Principal Component Analysis*

The high score of communalities seen in Table 2 shows that greater majority of the identified variables used for the study are indeed, appropriate and relevant in defining the character of urban system in the study area. The result of PCA (extracted from the data and rotated using varimax with Kaiser-normalization) on the basis of eigenvalues of 1 and above has produced four (4) principal components that has accounted for 86.836% of the total variance within the data set as presented in table 3.

Functions	Components			
	1	2	3	4
Abattoir	.347	.117	.713*	.044
Agro-Chemical Stores	.976*	-.018	.063	.061
Automated Teller Machine	.219	.967*	.091	-.020
Book Shops	.677*	.601	.134	.098
Boutique Shops	.322	.896*	.243	-.029
Building Material Shops	.790*	.424	.336	.030
Car Wash Services	.680	.699*	.120	.023
Carpentry Workshops	.613	.670*	.293	.200
Cement Stores	.879*	.346	.279	.080
Religious Worship Centres	.730*	.514	.306	.188
Film Viewing Halls	.780*	.448	.249	.100
Refrigerated Warehouse	.686*	.556	.397	-.102
Commercial Bank PLC	.219	.967*	.091	-.020
Cooking Utensil Shops	.798*	.439	.292	.031
Cyber Café	.336	.909*	.210	.012
Daily Market	.193	.104	.721*	.165
Electrical Electronic Shops	.874*	.304	.314	.020
Filling Stations	.775*	.490	.353	-.030
Hair Dressing/Barbing Salons	.729*	.521	.370	.074
Public Water Supply	.590*	.543	.220	.280
Guests Houses/Hotels	.789*	.415	.387	.012
Laundry Services	.820*	.467	.217	.048
Mechanic Workshops	.714*	.585	.345	.065
Metal Fabrication Workshops	.756*	.569	.241	.017
Thrifts and Cooperatives	.516	-.052	.415	.533*
Mortuary	.163	.804*	.247	-.011
Motor Parks/Garages	.522	.725*	.366	.011
Newspaper Stands	.219	.967*	.091	-.020
Nursery Primary Schools	.746*	.442	.350	.131
Periodic Markets	.045	.050	.104	.826*
Pharmaceutical/Medicine Shops	.811*	.462	.293	.137
Photo/Video Studios	.758*	-.048	.465	.149
Security Outfits	.693*	.371	.354	-.068
Post Office/Postal Agency	.219	.967*	.091	-.020
Hospitals/Health Centres	.725*	.508	.195	.117
Printing/Computer Business Centres	.734*	.607	.201	.040
Provision Stores	.748*	.577	.290	.055
Public Cemetery	.148	.727*	-.020	.269
Public Power Supply	.506	.178	.688*	-.064
Restaurants	.897*	.360	.181	.087
Milling/Grinding Machines	.754*	.446	.331	.195
Secondary Schools	.681*	.584	.300	.043
Shoe Marker/Mender Shops	.476	.624*	.475	.067
Table/Sachet Water Factory	.114	.730*	.012	.050
Tailoring Shops	.777*	.524	.286	.089
Telecommunication Masts	.627*	.495	.374	-.032
Tertiary Institutions	.376	.503*	.162	.136
Timber Shops	.547	.752*	.214	.007
Law Court	.487	.806*	.154	.063
Phone Charging Shop	.389	.303	.599*	.324
Foam/Matresses Shop	.976*	-.070	.050	.059
L.G. Council Hall	.358	.599*	.492	-.028
Eigenvalues	20.802	17.193	5.599	1.560
% Variance	40.004	33.064	10.768	3.001
Cumulative %	40.004	73.065	83.836	86.836

Table 3: Principal Component Matrix of Drivers of Growth in Settlements of the Study Area

Source: Author's Field Work Analysis, 2016

The four (4) principal components herein refers to as drivers of growth are used as combination criteria for defining the functional character as well as assessing the performance of settlements in the emerging urban system of Vandeikya LGA. These drivers are named as follows:

- Socio-economic services
- Commercial services
- Basic urban services
- Rural based services

3.1. Socio-Economic Services (Component 1)

This component accounts for a total eigenvalue of 20.802, explaining 40.004% of the total variance and loaded positively and significantly by 29 variables. These variables include agro-chemical stores, bookshops, building material shops, cement stores, religious worship centres, film viewing halls, refrigerated warehouse, cooking utensils, electrical/electronic shops, filling stations, hair dressing/barbing saloon, public water supply, guest houses/hotels, laundry services, mechanic workshops, metal fabrication workshops, nursery/primary schools, pharmacy/medicine stores, photo/video studios, security outfits, hospital/health centres, printing/computer business centres, provisions stores, restaurants, milling/grinding machines, secondary schools, tailoring shops, telecommunication masts, and foams/matresses shops. These variables relate to socio-economic services. Component 1 is therefore, the most important driver of growth in the emerging urban system of the study area.

3.2. Commercial Services (Component 2)

This component contributes a total eigenvalue of 17.193 explaining 33.064% of the total variance in the data set, and loaded positively by 17 variables namely automated teller machine, boutique shops, car wash services, carpentry workshops, commercial bank PLC, cyber café, mortuary, motor parks/garages, newspaper stands, post office/postal agencies, public cemetery, shoe maker/mender shops, table/sachet water factory, tertiary institutions, timber shops, law courts, and local government council halls. Most of these variables defining this component relate to commercial services. This component is the second most important driver of growth in the emerging urban system of the study area.

3.3. Basic Urban Services (Component 3)

This component accounts for a total eigenvalue of 5.599 explaining 10.768% of the total variance in the dataset and is loaded significantly by 4 variables namely abattoir, daily market, public power supply, and phone charging shops. The variables that loaded positively on this factor relate to basic urban services. This component is the third most important driver of growth in the emerging urban system of the study area.

3.4. Rural-based Services (Component 4)

This component loaded significantly by 2 variables namely thrift and cooperative societies, and periodic markets. It accounts for total eigen value of 1.560 explaining 3.001% of the total variance in the data set. All the 2 variables that loaded positively on this component relate to rural-based services. This component is the fourth most important driver of growth in the emerging urban system of the study area.

3.5. Performance of Settlements on Four Growth Drivers in the Emerging Urban System

To ascertain the influence of the growth drivers on individual settlements in the emerging urban systems of the study area, the component scores of the 67 settlements derived from the PCA was used. The positive or negative loading of the component scores in a given settlement is an indication of its level of growth influence. Positive loading implies positive influence while negative loading implies negative influence. Table 4 shows the distribution of the component scores for the four drivers of growth.

Settlements	Component Scores			
	Component 1	Component 2	Component 3	Component 4
Abwa-Mbaduku	-0.03070	-0.05789	-0.60279	0.95840
Achagh	-0.02124	-0.08653	-0.50939	-1.45517
Achwa	0.03647	-0.06743	-0.65538	-1.54965
Adamgbe	-0.22270	-0.18025	0.28623	1.44131
Adeiyongo	-0.52252	-0.15064	1.23746	0.61048
Agbo	1.76238	7.79549	0.73076	-0.16513
Ageva	-0.18222	0.00248	-0.57788	0.44435
Agidi-Mbakena	-0.01164	-0.10471	-0.44580	-0.98605
Aginde (Uganden)	-0.42722	-0.07476	0.67690	-1.36501
Agirgba	-0.03996	-0.07458	-0.43922	-1.24345
Agu	-0.23286	-0.28690	0.51673	0.59827
Ahilejime	-0.16585	-0.08379	-0.55229	0.44810
Ajoko	-0.19143	-0.07346	-0.56916	0.26237
Ako-Abwa	-0.17362	-0.10057	-0.58124	0.36002
Ako-Fate	-0.15598	-0.07032	-0.53709	0.47878

Settlements	Component Scores			
	Component 1	Component 2	Component 3	Component 4
Amadu	-0.05907	-0.06681	-0.50355	-1.48537
Anhyulatswar	-0.10095	-0.04971	-0.63700	0.15982
Ankar	-0.19418	-0.06310	0.48620	0.45302
Anongo	-0.35181	-0.19465	0.76006	0.77511
Anza	-0.18321	-0.02617	-0.44062	0.30761
Ashinya	-0.21102	-0.03902	-0.54364	0.15171
Asue	0.00448	-0.08515	-0.53538	-1.53183
Atayo	0.02203	-0.10054	-0.50784	-1.39608
Bako-Ningev	-0.41176	0.08727	0.52157	0.610018
Bar-Azov	0.04396	-0.08301	-0.64094	-1.65568
Betse	-0.62459	-0.11382	0.95846	1.10019
Branch - Akehe	-0.07751	-0.09795	-0.29197	-1.10112
Branch-Atser	0.58494	-0.62667	3.63836	0.39874
Chi	-0.47539	0.46191	-0.59773	0.73211
Community	-0.21184	-0.05542	-0.45963	0.46218
Dagba	-0.18471	-0.05336	-0.54858	0.05628
Dyegh (Adi)	-0.15097	-0.11217	-0.22569	1.19380
Gadern-Hunakaa	-0.18728	0.06479	-0.46651	0.33827
Gbagbongom	-0.30156	-0.12220	0.55221	1.21447
Gbagir	-0.11698	-0.10680	-0.55525	0.30658
Gbem	0.85878	-0.48415	1.48189	-0.75591
Geri Tor-Tiv	-0.07204	0.05287	-0.68965	0.38760
Gube	-0.16434	-0.04794	-0.72127	-0.21156
Gusha	-0.09835	-0.02550	-0.62584	0.12397
Ifan	-0.16919	-0.08132	-0.518871	0.17981
Ihugh	7.56969	-1.78271	-0.54517	0.50811
Ikpa-anyam	-0.16664	-0.08292	-0.58695	0.30733
Ikpoikpoi (Ibi)	-0.14651	-0.02977	-0.73280	-0.13710
Ikyundu	-0.16221	-0.06410	-0.60390	0.31007
Ivenge	-0.67521	-0.20201	1.10164	0.29216
Jape	-0.27195	-0.19306	0.27952	0.59896
Kaamem-Mbayongo	-0.04783	-0.12792	-0.44351	-1.30806
Kiishi	-0.04388	-0.11822	-0.63095	0.04588
Koti-Yough	0.04949	-0.24551	2.43506	1.64970
Kpamo	-0.31491	0.15131	-0.47999	-1.09920
Mandeun	-0.22501	-0.16036	-0.27295	0.46977
Mede	-0.09312	0.42705	-0.95860	3.20794
Naa	0.02923	-0.08018	-0.70844	0.17565
Ndere	-0.28042	-0.17131	0.19865	0.24850
Pev	-0.14214	-0.07737	-0.61137	0.27689
Taatihi	-0.15828	-0.04676	-0.71921	-0.21424
Tsar	0.74693	-0.42539	3.37597	-0.18953
Tse-Kpum	-0.44265	-0.17793	0.55902	0.41911
Tse-Mker	-0.46944	-0.32428	3.22392	-3.27598
Tsendzuul	-0.19685	-0.06986	-0.40221	0.17891
Tsua	0.11628	-0.15617	-0.45099	-1.27958
Tyemimongo	-0.40945	-0.08402	1.13944	0.50863
Tyogbenda-Avenda	1.80123	-0.03787	-0.43516	-1.17510
Tyokase	-0.01909	-0.08052	-0.50390	-1.49748
Ugba	-0.14769	-0.05037	-0.37743	0.42615
Uka	-0.55739	-0.08237	0.71163	0.85897
Ukpe	-0.12926	-0.12463	-0.42784	0.04204

Table 4: Distribution of Factor Scores for the four Drivers of Growth
Source: Author's Field Analysis, 2016

The information in table 4 reveals the level of influence each growth driver has on settlements in the emerging urban system of the study area as indicated by their loadings.

3.5.1. Variation based on Socio-Economic Services

When settlements in the emerging urban system of Vandeikya LGA were assessed based on the driver of growth known as socio-economic services (component 1) using the component scores, the result shows a total of 13 (19.40%) out of the 67 settlements in the system with positive scores. These settlements include Ihugh, Agbo, Tsar, Koti-Yough, Gbem, Branch-Atser, Naa, Tyogbenda-Avenda, Tsua, Achwa, Asue, Atayo, and Barazov. Figure 2 shows the spatial location of these settlements in the study area. Even within this group, there is variation in the level of growth among the settlements as shown by the wide range of scores from 0.00448 for Asue (least) to 7.56969 for Ihugh which is the highest. Based on the result, these settlements have strong tendency towards urbanisation in the study area hence their positive loading on socio-economic services, while the remaining percentage of settlements loaded negatively on socio-economic component. This implies that if deliberate regional development plan is not done for the study area, socio-economic development will be concentrated in very few settlements thereby stifling development of other settlements in the region. This finding when compares with Ofem (2012) shows remarkable difference in the number of settlements with strong tendency towards urbanisation in Akwa-Ibom State. While Ofem (2012) reports that 57.32% of settlements in Akwa-Ibom state have strong tendency towards urbanisation; this study found that only 19.40% of settlements have the tendency in Vandeikya LGA of Benue State.

3.5.2. Variation based on Commercial Services

When the 67 settlements in the emerging urban system of the study area were assessed based on this driver of growth (commercial services), the result shows variation among settlements in the study area. A total of 8 out of the 67 settlements loaded positively on this component accounting for 11.9%, while the remaining 59 settlements have negative scores. The 8 settlements include Agbo, Mede, Geri-Tortiv, Ageva, Chi, Bako-Ningev, Garden-Hunakaa and Kpamo. Agbo settlement has the highest score of 7.79549 while Ageva has the lowest positive score of 0.00248 under this group. Figure 3 shows the spatial location of these settlements in the study area.

3.5.3. Variation According to Basic-Urban Services

The distribution of positive scores on this component according to settlements in the emerging urban system shows that 21 settlements accounting for 31.34% out of the 67 have positive loadings ranging from 0.19865 (Ndere) to 3.63836 (Branch-Atser). These settlements include Adamgbe, Adeiyongo, Agbo, Aginde, Agu, Ankar, Anongo, Bako-Ningev, Betse, Branch-Atser, Gbagbongom, Gbemlvenge, Jape, Koti-Yough, Ndere, Tsar, Tse-Mker, Tse-Kpum, Tyemimongo and Uka. Figure 4 shows the spatial location of these settlements in the study area. However, there is variation in level of development even among settlements with positive loadings on this component. For instance, Branch-Atser, Tsar, Tyemimongo, Tse-Mker and Koti-Yough settlements are the most developed hence the highest positive scores. Furthermore, the result shows that the remaining 46 settlements accounting for 68.76% in the emerging urban system of the study area have negative loadings. This implies that greater percentage of settlements in the study area performs poorly on this component. It therefore means that deliberate plans must be made to extend this development to these settlements.

3.5.4. Variation in Rural-based Services

This component which is defined by 2 variables (thrift and cooperative societies, and periodic markets) relate to rural-based services. The component was found to be one of the catalyst transforming rural settlements to urban in the emerging urban system of the study area. When the 67 settlements in the emerging urban system of the study area were assessed on the basis of this component, the result shows that 45 settlements accounting for 67.16% of settlement in the system loaded positively on this component. The positive scores range from Ukpe 0.04204 (least) to Mede 3.20794 (highest). These settlements include Abwa-Mbaduku, Adamgbe, Adeiyongo, Ageva, Agu, Ahilejime, Ajoko, Ako-Abwa, Ako-Fate, Anhyulatswar, Ankar, Anongo, Anza, Ashinya, Bako-Ningev, Betse, Branch-Atser, Chi, Community, Dagba, Dyegh, Garden-Hunakaa, Gbagbongom, Gbagir, Geri-Tortiv, Gusha, Ifan, Ihugh, Ikpa-anyam, Ikyundu, Ivenge, Jape, Kiishi, Koti-Yough, Mandeun, Mede, Naa, Ndere, Pev, Tse-Kpum, Tsendzuul, Tyemimongo, Ugba, Uka and Ukpe. Figure 5 shows the spatial location of settlements on this component in the study area.

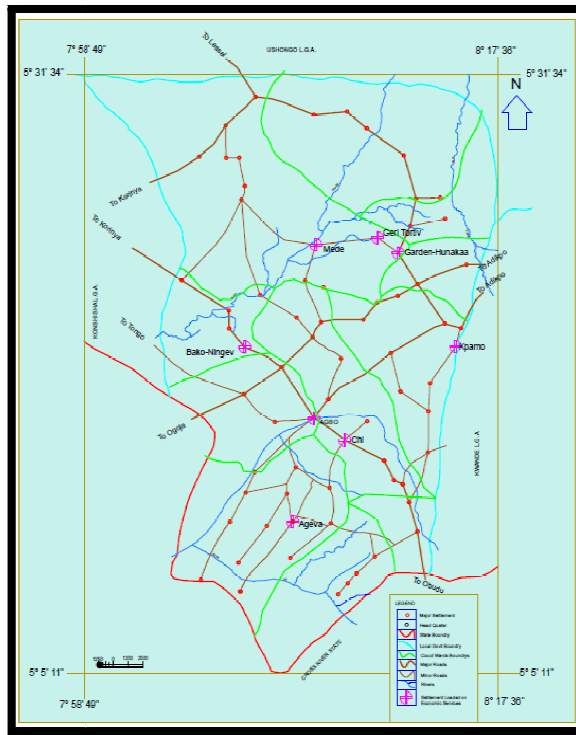


Figure 2: Settlements That Loaded Positively on Socio-Economic Services

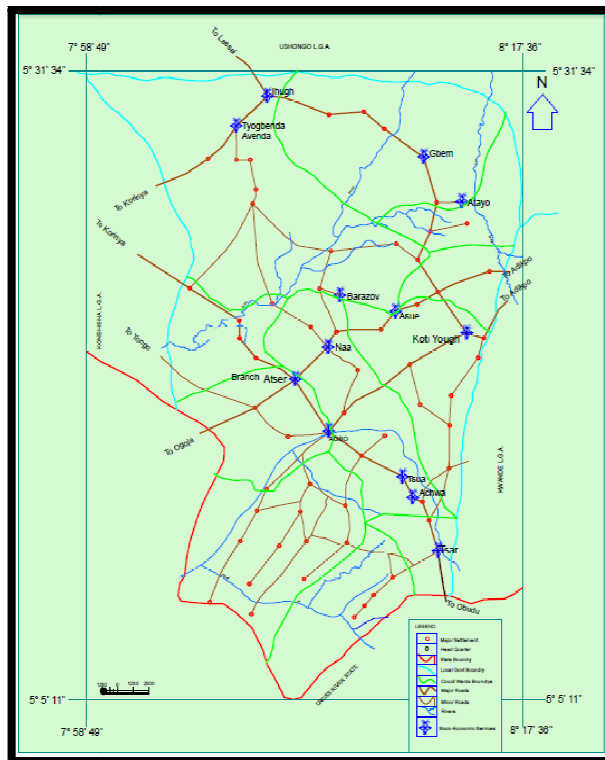


Figure 3: Settlements That Loaded Positively on Commercial Services

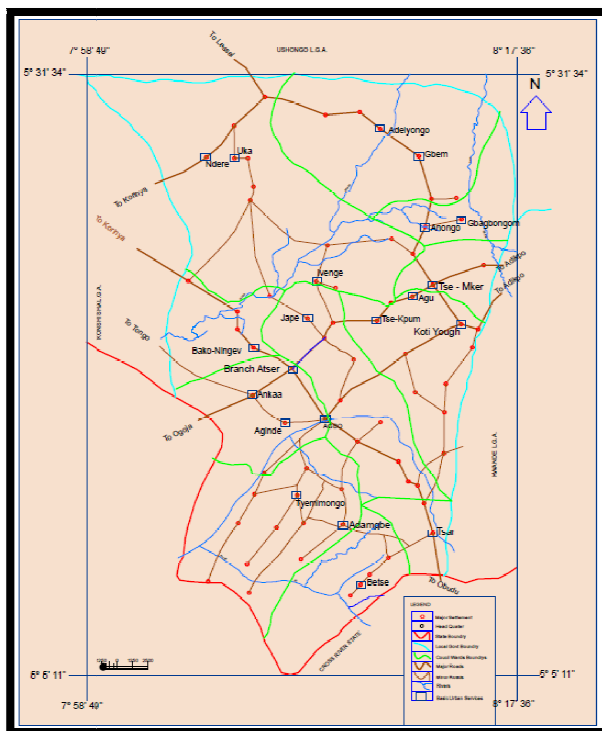


Figure 4: Settlements That Loaded Positively on Urban-Based Services

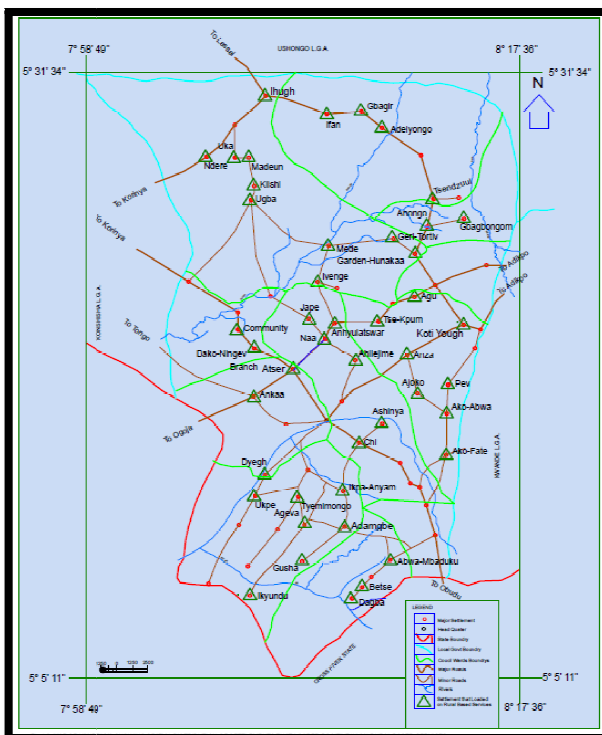


Figure 5: Settlements That Loaded Positively on Rural-Based Services

Figure 2, 3, 4, 5 map of vandeikyalga showing the performance of settlements on the four drivers of growth. The high number of settlements with positive scores on this component indicates that development of periodic markets and, thrifts and cooperative societies (locally known as *Bam*) in the study area are well spread. This component gives impetus to urbanisation and led the foundation for the development of urban system hence many big cities in developing countries today only started as rural periodic markets. Rondineli and Ruddle (1976) noted that rural market centres are the focal points for wide variety of social, economic, political and physical linkages among development centres and between those centres and their rural hinterlands. They added that areas lacking both market towns and transport connections remain relatively isolated from trade and access to services.

4. Conclusions and Recommendation

An efficient settlement system is a basis for the stimulation of economic, social, spatial integration and political development of the region in which it is located. Empirical evidence from some of the advanced countries confirmed the important role of settlement systems in regional development. Emerging urban centres of various categories in most countries became centres of activity and of innovation, focal points of transport networks, location of superior accessibility at which firms could most easily reap economies of scale, serving local urban and regional markets. Haven analysed the performance of settlements within the emerging urban system of the study area on the basis of the four identified drivers of growth, it can be deduced from the findings that urbanisation process is in motion in the study area. The level of influence of the four drivers of urbanisation in the study area also varies among settlements. The availability of non-agricultural functions constitute these drivers of growth and catalyst for transforming the rural settlements into urban however, there is wide development gap among most of these set of settlements as observed by the wide range of scores associated with each components. There is therefore, urgent need to deliberately plan for the present and future development of these settlements for a balanced and coordinated socio-economic development of the region.

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