Rural-Urban Integration and Spatial Planning in Edo State, Nigeria

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Abstract

Settlement planning is becoming an important reality in developing countries as economic, social and environmental sustainability are dependent on it. As they urbanize, there is the need for these settlements to be linked in an integrated manner so that there will be both sector and spatial development. The investigation is on rural-urban integration and spatial planning in Edo State, Nigeria. The paper reviews literature on environment, economy, and society in both the developed and less developed countries. The reviewed literature formed the basis for evaluating the context of Edo State's rural-urban integration and spatial planning. It concluded that there is no proper spatial integration among rural and urban settlements in Edo State. It recommends spatial cohesion, rural master planning and the linking of rural and urban economies together for sustainable settlement spatial planning.

Keywords: Integrated planning, sector planning, settlement cohesion, spatial linkages, spatial planning

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Ghana Journal of Geography Vol. 13 (1), 2021 pages 50-62

https://dx.doi.org/10.4314/gjg.v13i1.3

Introduction

Urbanization is a growing phenomenon in the 21st century; and the trend is increasing especially in the developing countries. It is expected that by 2050, more than 50 percent of the world's population will live in urban centres (UN Habitat, 2015). The greatest rates of growth will come from African and Asian countries. The growth of urbanization is mainly fuelled by migrants to urban areas. Many people live in more cities than in rural areas and this has implications in both rural and urban areas. These implications have both positive and negative effects on urban and rural settlements.

For a very long time, spatial planning of settlements have been dichotomized into urban and rural, which were largely viewed as having different identities and not linked in terms of their functions. This perspective view has largely been responsible in treating the two as separate and to be planned differently. However, some planners have discountenanced with this view and have suggested that both settlements are at different points in a continuum. Thus this group of scholars regards settlements as growing phenomena in space and time, and the rural settlements are in transition of becoming urban settlements.

The idea of a rural-urban continuum implies that the rural and urban settlements are linked in space; and rural settlements cannot be in isolation of their urban counterparts. This relationship means that the two settlements can be brought together in spatial planning. This thinking has brought about the idea of integrated settlement planning and development in which the two settlements that were once separated are now viewed as having much in common and in fostering spatial development. The integrated rural-urban planning sets the rural areas as hinterlands of urban areas and the urban areas as the nuclei. In this light, the two settlements can contribute to each other's growth and development. It is expedient that the rural and urban settlements should form the basis of regional development because their resources can be complementary in addressing their common spatial problems (Organization of Economic Cooperation, 2013).

Integrated rural-urban development is a multi-sector indicator of addressing rural and urban settlement problems in agricultural, industry, social, and land use in which the two settlements gain mutually. Yigitcanlar (2015) described the complementary partnership that has taken place in space as a result of integration.

This study focuses on settlements of Edo State that are striving to develop. It examines the state of urbanization and the growth of settlements in terms of the linkages between the rural and urban areas. The study describes the different linkages that can be distilled in integrated rural-

urban development. It reviews literature of rural-urban planning and integration in both developed and developing countries. The review gives an insight into the spatial links between the urban and rural areas in Edo State. Specifically, the areas of spatial ordering of settlements, agriculture, industrialization and environment will be investigated.

Conceptual Framework

Some concepts such as the Central Place Theory and Rank Size Rule have been applied in the planning of settlements that focus on spatial linkages. The Central Place Theory postulates that there is hierarchical distribution of settlements and activities in space; where the central places are usually the higher order settlements providing higher order goods and services to the lower order settlements. The smaller settlements are under the influence of the larger settlements. Walter Christaller propounded three principles in his articulation of the theory, which are market principle, administrative principle and transport principle. These principles explained how settlements and activities are organized in space (Waugh, 1995)

The marketing principle of K=3 emphasizes the centrality of higher order settlements (urban areas) in rendering services to the hinterlands which are the rural areas. According to Waugh (1995) the basic foundation of integrated development planning is derived from the central place theory that provides a framework for equitable and cost effective development in both the core economic centres and in the dependent peripheral areas (p.377). The central place theory helps in understanding the size, location, distribution, and clustering of activities in a regional space.

The Rank-Size Rule is a concept of how the size distribution of the population of settlements in a place is proportional to that of the largest settlement. Thus, the first ranked settlement will have the highest population; the second will have half of the first ranked settlement; and the third ranked settlement will also have one third of the first ranked settlement and follows in that order. This situation leads to spatial dominance and urban primacy which negates even and equitable distribution of population in regional space (Waugh, 1995; Josia and Basic 2018).

Literature Review

Literature abound that explain rural-urban integration in regional development. These generally explain both those that promote development and those that do not encourage it. These literatures also account for the part played by integration in the developed and developing countries.

Integrated Rural-Urban Development in the Developed Countries

In some developed countries, regional integration of settlements has been consciously pursued in order to reduce the disparity in development between urban and rural areas. According to the United Nations Centre for Regional Development (n.d.), emphasized that a useful tool for sustainable development rests on economic growth, social development, and environmental protection. Integrated development has been pursued in terms of both functional and spatial levels. The functional integration focuses mainly on economic, social and political sectors; while the spatial integration considers how the indices of sustainable development are applied across regional space. The distinction between urban and rural areas is becoming rarified, especially at the peri-urban areas. The processes of industrialization, globalization, and urbanization have caused extensive changes in land use and in linkages between urban and rural areas. Division of labour, increasing mobility and migration as well as changing social preferences modified the flows of goods, people and resources (Organization of Economic Cooperation and Development, 2013). As a consequence, the dichotomy between rural and urban areas is blurring, creating the "peri-urban" as new spatial type, with its range of specific characteristic, problems and opportunities (Eppler, Fritsche and Laak 2015).

The policy of isolating the rural areas is gradually fading away in European Union countries; and current thinking is that the urban and rural areas are now seen as an urban environment (Eppler et al., 2015). European Union now perceives the regional space as posing challenges that can be addressed by cohesive policies through decentralization of activities.

The areas that are bordering cities in Europe are being integrated into the space economy of urban areas which have affected the traditional employments of the residents of rural-urban fringe (OECD, 2013). Many measures of protection have been adopted to protect fertile land in the fringe from being encroached upon by urban land uses.

The developments in the regional space are being accommodated in Europe through the decentralization of sector activities by bringing spatial equity into the indicators of development (Yigitcanlar, 2015). The impact of investments on the rural environment is always

evaluated based on strategic economic assessment to reveal whether the investments negatively or positively affect the rural people (Yigitcanlar, 2015).

An attempt in urbanizing the rural areas in China is being experimented by preparing master plans to direct the growth of the rural space based on infrastructure and planned layouts (Bray, 2013). The objective of such mode of planning is to reduce the spatial inequality in terms of spatial indicators of development.

Integrated Rural-Urban Development in Less Developed Countries

In the less developed countries, the disparity between urban and rural areas is sharp as most investments are concentrated in the urban areas. There are no much conscious attempts in linking urban and rural areas except that rural areas would supply the food and raw material requirements of the urban areas and the urban areas exchange their products to the rural areas. There are movements interdependence between the rural and urban areas, which leads to continuous out migration from the villages to towns and cities. Okafor (1975) chronicled the attempts made in integrated rural development to reduce the gap in development between the rural and urban areas. Those attempts did not succeed because they were based on sectors and not linked with spatial planning. Okafor also discussed why single project approach does not sustain development because it is not holistic. Therefore, he recommended an integrated approach that is holistic in addressing rural problems.

A major problem in less developed countries is the tacit exploitation of rural resources without regard to their environmental implications. In Laos, a deliberate effort was made to integrate space into their development by prioritizing through investments that are socially, economically, and environmentally sound (Singsavanh, Jensen, Grontmi, & Bull, 2010). One of the most pathetic impacts of negative urbanization is the degrading use of peri-urban environment, a waste deposition centres, and unguided physical developments. These phenomena were observed in the rural fringe of Benin City (Onaiwu, D.N. & Onaiwu, F.O., 2019).

Rural areas vary widely in Less Developed Countries according to their proximities to urban areas which determine their opportunities for development (United Nations Conference on Trade and Development, 2015). It also argued that structural transformation is a means of poverty eradication. In 1995 Taghvaee recognized that rural urban disparities and inequalities contribute to over urbanization and rural backwardness in developing countries. He acknowledged that developing countries have minimized rural urban disparities and equalities through the provision and the expansion of various urban services in rural areas. His study was

based on Iran: how to reduce rural urban disparities in a provision of basic service facilities. He hypothesized that the provision of basic facilities, such as healthcare may significantly contribute to reducing rural-urban disparities and inequalities.

The study found that Iran needs to evolve an efficient system of providing basic services and facilities which would decrease the present socio-economic gap between rural-urban development. He suggested strategies such as Central Place Theory, Growth Pole, Service delivery among others as a means of striving towards integrated development. These can help in balancing the development between rural –urban migration.

Urban primacy has been recognized as the growth trend in Ghana in the largest cities of Accra, Tema, Kumasi, Secondi and Tarkoradi. Urban areas are characterized by growing distinction in the provision of environmental sanitation and services between urban and rural areas. The way forward that was recommended is integrated urban development; promoting harmonious rural-urban linkages through industrialization and agricultural development (Songsore,n.d).

Syagga (2001) identified housing in Kenya as a problem that requires an integrated multi-sector al approach to solve. The issue of housing was prioritized to be addressed. However, the scheme was not met with success, but has to consider the livelihood approach.

Hussain and Suttie, (2016) emphasized the link between urbanization and food chain in Sub-Saharan Africa and concluded that small-scale farm holdings should be encouraged. They particularly claimed that rural economy should be integrated with their urban counterpart. Thus, it is clear that developing countries emphasize the facet of development that strike their needs as an approach of integration as revealed by the review above.

The Study Area

Location

This study was carried out in Edo State, Nigeria which is one the 36 states that make the federation. The state is located within latitudes 5^{O} 44’ 19.777’’ and 7^{O} 34’ 15.076’’North of Equator and longitudes 4^{O} 58’ 35.523’’ and 6^{O} 42’ 3.433’’East of Greenwich. The study area is bordered by Kogi State in the North, Anambra State in the East, Delta State in the South and Ondo State in the West. There are 18 Local Government Area (LGA) councils. The state covers a land mass of about 19, 819.277km^2 (see Figure 1).

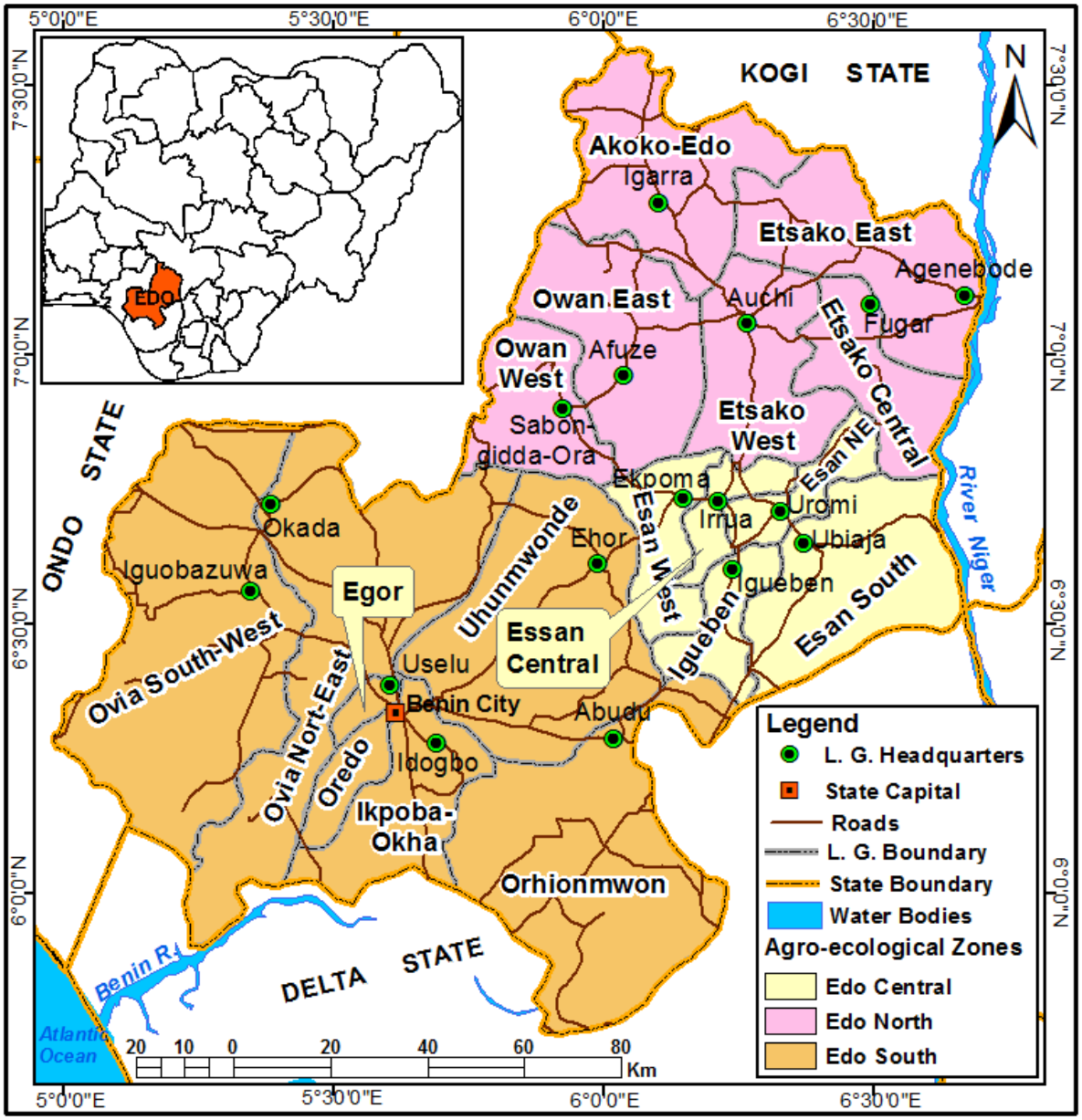

Figure 1: Edo State showing LGAs and Senatorial Districts

Source: Edo State Ministry of Physical Planning and Urban Development

The Context of Integrated Development in Edo State

Integrated development is often times a watchword among development planners, but in practice, what they do is a mere sector planning. Rural-urban integrated development can be sustained under the three pillars of sustainable development, (i.e. society, economy, and environment), and the extent of spatial ordering of development indicators.

The Economy

The economy of Edo State is not of high impetus as the manufacturing industries are few. Most of the industries are located in Benin City. The local government headquarters have only few of these. These industries create few jobs; however, they attract rural migrants and increase the population of the places where they are found. Benin City, the Edo State capital, also has the greatest number of government employees in various ministries and parastatals. The 18 local government headquarters also have their own share of the employees. Thus this also attracts migrants to these settlements that are employed and those looking for employment opportunities.

Apart from paid formal jobs in Benin City and local government headquarters, Benin City and the local government headquarters are also the commercial nerve centres of Edo State. Many of the workers in Edo State are in the informal sector, especially in trading and small scale businesses. The few urban centres accommodate these groups of workers in large numbers. These traders are found in shops, locked-up stores and traditional markets. Some of the workers are also artisans and found in settlements with large population size that afford them the opportunities to practice their arts.

Another major employer of labour is agriculture. This takes the largest number of those in employment. This group of workers do not practice farming in large scale and are not strictly commercial farmers. Most of the farming is done in rural areas and only insignificant farming is practiced in urban areas. The proportion of workers that are employed in this sector is declining over the years as the able-bodied youth migrate to the urban areas for white collar jobs.

The implication of how the economy of the state operates is that the few urban settlements are the nodes of activities while the vast rural areas are devoid of activities. There are no strong economic links between the few urban centres and their rural hinterlands. The few thriving industries are not linked with the rural areas in terms of the supply of raw materials. Thus they draw patronage from the rural areas without giving anything substantial to the rural areas. The links manifest as backwash effects, that is, the urban areas 'parasiting' on the rural areas. If there were to be integrated links between the urban and rural areas, the rural areas will be encouraged to provide the goods needed in the urban areas. In filling the vacuum in demand created by urban industries in high demand of rural products, multiplier effects will operate such that the rural productive capacity will rise. Thus this will amount to rural economic development.

As a result of the absence of economic linkages and flow of activities between the rural and urban settlements, the two are isolated and the rate of development is drastically slowed down. The high unemployment rate in Edo State, both urban and rural unemployment, takes its toll in high crime rates and anti-social activities especially amongst youths.

Environment

The environmental component of the sustainability of settlements is given little attention in policies aimed at developing the regional space of Edo State (Edo State Government, 2010). Most development activities that are captured in the annual budgets of the state are either in Benin City or any of the major local government headquarters. It is instructive to note that these major urban settlements are already having land constraint both in quantity and quality. This explains why some capital investments are located in flood-prone areas and marginal sites Edo State. Measures that are directed to fix some of the environmentally degraded areas are place-selective, (i.e. the urban areas are always given attention first). For example Queen Ede Erosion site in Benin City and Auchi Erosion Gully Project are in urban areas; Ibore erosion site that has affected vast expanse of rural land is given very little attention in government scheme of doing things.

According to Edo State Government, the problem of flooding and gully erosion traverse political delineation and aggregations like wards, communities, local governments, cities, states and the federal level. In spite of this, the seeming focus of Edo State Government is the urban areas of Benin City and local government headquarters. Thus this practice is unsustainable!

Edo North Senatorial District has some solid minerals that are presently exploited by some private companies. The activities of quarries are degrading the environment with their negative effects on farming, vegetation, wildlife and human health (Ndinwa & Ohwana, 2014). The case of Igarra mining activities is a common landscape of degradation in Edo North Senatorial District where much is not done to intervene on the degraded environment. It is clear that this unwholesome mineral exploration with little or no remedial action on the environment is unsustainable.

Another unsustainable practice in Edo State environment is the impact of solid wastes in the urban areas and peri-urban areas or fringe. Solid wastes have defiled clearance in Benin City, Auchi, Ekpoma and many headquarters of local government areas of Edo State. The rural areas have their share of the problem as they become the dumpsites of wastes mainly generated in urban areas (Onaiwu, D.N. & Onaiwu, F.O., 2019). The dumpsites are usually abandoned

burrow pits that were formerly used for the mining of sand in foundation stabilizing material. These solid wastes dumpsites cause pollution and unsightly in the environment.

Society

A major impact in integrated development across rural-urban space is that of spatial spread of social impacts. Equity in the distribution of social positive impacts sends a feeling of belonging to a people. These social impacts take the toll on education, infrastructure, amenities, housing, roads and so forth. Next, we consider the extent there has been equity in the spread of social institutions and facilities between the rural and urban areas of Edo State.

Education is a major component of Edo State Government Fiscal Improvement and Service Delivery Development Policy Operation. It has made a bold attempt in improving the quality of building infrastructure of government-owned primary schools, secondary schools and the training of teachers. This is a commendable development as there is no distinction between rural and urban schools. However, the tertiary educational institutions are stagnated, especially those of Ekiadolor College of Education and Edo State Polytechnic, Usen. These schools that are located in the rural environment do not receive Edo State Government support as those schools in the urban areas. This action does not amount to balance development of tertiary education in the regional space. A critical review of what is happening in education transformation in the state points to the fact that schools in the urban areas are more favoured. Important areas in the development of settlements are the provision of facilities of roads, electricity and water supply. In 2010, Edo State adopted the Edo State Strategic Plan which runs to the year 2020 and anchored it on three key pillars. These are people (building the human capacity of Edo citizens with emphasis on water, health, and education); infrastructure (with an emphasis on power, housing, transport, tourism, roads and drainage); and production (with emphasis on agriculture, industry and commerce). Most of the activities that border on social welfare have not met their targets. The urban road construction takes precedent over that of the rural roads. The little achievements made in health are oriented towards the urban dwellers.

Spatial Ordering of Settlements

The spatial ranks of settlements go a long way in showing how integrated the settlements are in space, and in this case, Edo State. To illustrate how the settlements, especially the local government headquarters fare, this illustrated with data for localities got from 1991 census

figures by National Population Commission (NPC). There are no data for settlements in 2006 census because they were not released by NPC. Table 1 shows the population sizes and ranks of some settlements in Edo State.

Table 1. Population Sizes, Ranks and Primacy of Local Government Headquarters in Edo State

Local Government Areas/ Headquarters	**Population size**	**Rank**	**Urban primacy**
Oredo: Benin City	780,976	1	
Etsako West: Auchi	71,009	2	1/10.992
Esan West: Ekpoma	61,408	3	1/12.72
Esan North East: Uromi	31,450	4	1/24.83
Akoko Edo: Igarra	24,940	5	1/32.28
Owan East: Afuze	24,556	6	1/31.80
Esan Central: Irrua	24,194	7	1/32.28
Owan West: Sabongida-Ora	23,223	8	1/33.62
Etsako East: Agenebode	22,212	9	1/35.16
Ovia South West: Iguobazuwa	21,738	10	1/35.93
Orhionmwon: Abudu	21,349	11	1/36.58
Esan South East: Ubiaja	21,030	12	1/37.14
Etsako Central: Fugar	18,319	13	1/42.63
Ovia North-East Okada	14,919	14	1/52.35

Source: National Population Commission 1992 (Modified by Author).

Benin City is the 1st ranked settlement in Edo State. The 2nd ranked settlement is Auchi; however, Benin City is more than 10 times bigger than Auchi. And the ranks and the sizes of other settlers are found in Table 1. A case of primate city development is clear in the pattern of urban distribution of population in Edo State. In terms of spatial ordering, the imbalance needs to be redressed in order for integrated and equitable distribution of population and activities in Edo State to take place.

Conclusions and Recommendations

The discourse, integrated rural-urban development in Edo State, indicates that this does not fit the description of what obtains in integration. There is no way it can be established that there is the closing up of the gap in development between the urban and rural areas. The migrants continue to leave the rural areas for the urban areas. The rural areas are the urban receptacles for solid wastes at the peri-urban areas. The urban population continues to grow at the expense of rural settlements. There is a clear evidence of primate city development when the population

size of Benin City is compared with that of any urban settlement in Edo. The continued emphasis on Benin City and few other settlements in terms of infrastructural facilities, investments and with next to nothing in the villages, makes a case for spatial ordering in order to strive at integrated development. In enthroning integrated development, the following recommendations have a role to play.

- There is the need for cohesion policies in the planning of employments, economic investments, and social infrastructure. The spread of these across regional space will lead to the redressing of spatial imbalance in population and development (Josic & Basic, 2018).

- The creation of employments can only be sustainable if they are tied to local resources. There are many agricultural produce that can be used in industries if these urban industries are made to be linked with rural areas.

- Spatial planning needs to be done through the production of rural master plans. This is already taking place in rural China because of its large burgeoning population (Bray, 2013). Nigeria's population is also expanding and the rural areas must be prepared to face the challenges of spatial growth and development.

- Sector planning must be tied to spatial and functional planning to discourage official corruption and to enable the masses in Edo State to enjoy real development.

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