



## COVID-19: PATHWAY FOR URBAN PLANNING FOR TRANSFORMATION IN OWERRI MUNICIPAL, IMO STATE, NIGERIA

<sup>1</sup>Francisca Nkemdilim Onah, Ph.D., <sup>2</sup>Christopher Onyemaechi Ugwuibe, Ph.D., <sup>2</sup>Udenze, Chukwudike, <sup>2</sup>Atabo, Ichaba Samuel and <sup>1</sup>Eze, Ifeyinwa Jennifer

<sup>1</sup>School of General Studies, Social Science Unit, University of Nigeria, Nsukka, Enugu State, Nigeria

<sup>2</sup>Department of Public Administration and Local Government, Faculty of the Social Sciences, University of Nigeria, Nsukka, Enugu State, Nigeria

**Abstract:** Since Imo State experienced her index case of Corona virus in April 2020, things have rapidly changed across the state. The global pandemic has exposed extensive vulnerabilities, especially in local public health and urban planning. Owerri Municipal is a typical planned city under a master plan which however because of the self serving default of the planning authority has been abandoned with buildings, constructed on drainages and sidewalks and creating an unprecedented urban sprawl congealed in odoriferous miasma. The extensive growth in Owerri Municipal safety margins is in fact what necessitated the total lockdown in the wake of the coronavirus pandemic. In the absence of any significant affordable housing strategy by the state, citizens continue to explore different approaches to accommodate themselves. Often times, residents are not served by public utilities and are developed in gross violation of extant urban planning frameworks, and are thus vulnerable to health hazards. It is against this backdrop that the infection has provided an opportunity for urban planning for transformation in Owerri Municipal of Imo State, Nigeria. The study adopted the institutional theory. The research relied on a rapid review of available national and international policy documents, including those related to the pandemic, authenticated secondary sources as well as the authors' knowledge of the subject of urban planning to articulate the viewpoint expressed in this study. The paper identified that chaos in the urban infrastructural decay emanates from deficiency in institutional weakness. The study recommended sustainable well-planned urban centers that minimize health risks from ill-equipped health care centers, dilapidated residential buildings and physical inactivity, while also mitigating future disease outbreak.

**Keywords:** COVID-19; Institutional Theory; Urban Planning; Policy; Nigeria.

### Introduction

People grouped together make cities. The spatial distribution of the population and its composition by age, sex and race or ethnic are the demographic bases for urban areas. In Nigeria today, most urban areas emerged from landscapes because man's principal occupation is agriculture and comprises cultivating crops and rearing of livestock (Onyekwelu, 2001). The urban centers have a long history in its growth and development. There were

extensive urban developments that predate the British Colonial administration where cities have existed for centuries such as: Lagos, Ibadan, Kano, Sokoto, Calabar and Port-Harcourt, etc. Other important urban centers include Oyo, Abeokuta, Ife, Zaria, Katsina, Jos, Bida, Owerri, Aba and Enugu (Fodio, 1978). The post independence led to indigenization of public service and expansion of Ministries, Departments and Agencies (MDAs) resulting in a high rate of new employment in

Public Policy and International Affairs Academic Journal

An official Publication of Center for International Research Development

Double Blind Peer and Editorial Review International Referred Journal; Globally index

Available @CIRD.online/PPIAAJ; E-mail: PPIAAJ@cird.online



urban centers. At present, the situation of the urban centers is apparent juxtaposition of virtually low, middle and high order uses in a reckless manner.

Currently, most urban centers in Nigeria and Owerri Municipal inclusive have undergone urban decay because of breakdown in basic services: portable water supply, electricity, efficient township transport services, efficient urban security outfit, affordable housing and waste disposal system. Paradoxically, urban land misuse is another severe environmental problem in Owerri Municipal. The perennial Amakohia and Orlu road floods in Owerri Municipal are good cases. Some buildings in Owerri Municipal are erected on flood plains, because of inadequate landscape assessment. Even more serious, is the absence of a functional, well-connected drainage system in the Municipality. The drains channel become dysfunctional and over flow their channels giving rise to flood disasters which claim lives and property.

Recent flooding in the South East, in 2020 rainy season, particularly, Owerri Municipal, Imo State has revealed the absences of planning templates and implementation designs for the area. With the prediction that by 2050 more than 80% of the world population will live in the urban areas and majority of this being in the developing countries including the Sub-Saharan Africa (Robert & Katie, 2018). The problem facing residents in Owerri Municipal in the future can only be imagined if sufficient resilience is not built into urban design.

A critical observation shows that urban planning; particularly health, adequate waste disposal system, transportation, housing etc, – has invariably become more risky for urban dwellers following the outbreak and spread of the COVID-19 pandemic over the past few months. Coronavirus disease (COVID-19) is an infectious disease caused by severe acute respiratory syndrome. The disease was first identified in December 2019 in Wuhan, China. The disease has since spread globally to more than 200 countries. On March 11, 2020 the World Health Organization declared the disease as pandemic. Common symptoms include fever, cough and shortness of breath

(WHO, 2020). Other symptoms may include muscle pain, diarrhea, sore throat, loss of smell and abdominal pain. While majority of the cases result in mild symptoms some progress to viral pneumonia and multi organ failure and in many cases results to death (WHO, 2020). At the time of writing this paper COVID-19 has no known cure and no vaccine. Prevention was therefore strongly recommended by WHO and this includes washing of hands with soap and running water; avoiding touching eyes, nose and mouth; practicing respiratory hygiene; using alcohol-based hand sanitizer; maintaining social distancing (maintain at least 2 meter between yourself and anyone who is coughing or sneezing).

Considering the rapid spread of the virus, there is an urgent need for the government and urban planners to develop strategies for transforming Owerri Municipal especially with the unprecedented and dramatic transformations of the world of work during/post COVID-19 pandemic era. In line with the above background, the general objective of the study is to ascertain how the outbreak of COVID-19 pandemic would facilitate the pathway for urban planning for transformation in Owerri Municipal, Imo State, Nigeria.

### **Materials and Methods**

Due to safety protocols established by health experts on COVID-19 pandemic, the study relied on rapid review of available national and international policy documents, including those related to the pandemic and other authentic secondary sources as well as the authors' knowledge on urban issues concerning Owerri Municipal to articulate the viewpoint expressed in this paper.

The key agencies in this regard are; Owerri Capital Development Authority (OCDA) and daily updates from Nigeria's Centre for Disease Control (NCDC) on COVID-19 cases in Nigeria. The NCDC data represents authentic national figures on total confirmed cases, total discharged, total fatalities and total number of laboratory tests carried out since the first case of the virus was recorded. Data for global cases were sourced from the Johns Hopkins University database which provides daily



updates on global cases of COVID-19. Each document was skimmed for relevance and then studied in detail after being deemed to be of potential significance.

**Description of the Study Area**

The study was carried out in Owerri Municipal which is one of the 27 local government areas of Imo State located in the south eastern part of Nigeria. Owerri Municipal is traditionally called Owerri Nchi Ise and has five indigenous kindreds which are: Umuorioronjo, Amawon, Umuonyiche, Umuodu and Umuoyima in the order of seniority (Adogu et. al 2015). It is the political capital of Imo State, Nigeria The climate of Owerri has two seasons, the wet and dry, with the wet seasons usually starting in March and ending in October, while the dry season usually begins in November and last till February. According to Egbu.et al (2011) Owerri Municipal is bounded on the West by Umuguma and Uratta. The study area covers an average radius of 15 km enclosing about an area of 1900k. Owerri is 147km North of Enugu State, 114 km South of Port-Harcourt, 64 km East of Umuahia, Abia State and 96km North-West of Onitsha, Anambra State (Ola, 1984).

**Corona virus (COVID-19) and the Nigeria Experience**

The coronavirus infections is a disease which has affected the planet, leading to deaths and have had significant impact on Nigeria economy and this has attracted the attention of a lot of scholars to investigate the pandemic. The COVID-19 which originated in China according to WHO (2020), has spread to more than 200 countries

prompting the WHO to declare the disease as a global pandemic. Confirmed COVID-19 cases according to Johns Hopkins University as at the time of writing, 31th October, 2020 were over 46,069,141 million globally, with over 46,069,141 fatalities and more than 30 million recoveries. Currently, the case fatality ratio of COVID-19 pandemic in Nigeria is 0. -03 (i.e. 3% of total confirmed cases). This value is less than that calculated from the global figures (CFR = 0.06) (Ohia, Bakary and Ahmad, 2020). It is important to note that Nigeria is the largest black nation in Africa with a population of 207,810,450 million people as of Saturday, October 31, 2020 based on Worldometer elaboration of the latest United Nations data (Worldometer, 2020). Furthermore, Nigeria population is equivalent to 2.64 per cent of the total world population and ranks number seven (7) in the list of dependency countries. As at 12th October 2020, the Federal Government of Nigeria extended the third phase of lockdown as a result of the growing wave of community transmission of COVID-19 infections. This extension of lockdown was also in connection with the incursions into 536 representing 69 per cent out of the Nigeria’s 774 Local Government Areas. Table 1 below shows the summary of reported coronavirus cases in Nigeria as at 31<sup>th</sup> October, 2020.

**Table 1:** Statistics of COVID-19 Pandemic in Nigeria as at 31<sup>th</sup> October, 2020

S/No	Population of Nigeria	Confirmed Cases	Discharged Cases	Deaths	Total Test Carried Out
1.	207,810,450	62,853	58,675	1144	625,510

**Source:** Nigeria Centre for Disease Control (NCDC) (2020)

**COVID-19 and Response Interventions in Imo State**

The government of Imo State did not relent in safe guarding the life of its citizens. According to Adebowale



(2020) the first cases of COVID-19 in Imo State were reported by Nigeria Center for Disease Control (NCDC) on April 26, 2020. Considering the rapid spread of the virus globally, the state government took practical demonstration steps to protect the citizens by opening six isolation centers across the state. These isolation centers were located at Aboh Mbaise general hospital, Umuguma general hospital, Okigwe general hospital, Federal Medical Centre Owerri, Imo Teaching hospital, Orlu and Imo isolation centre, Owerri (Nwachukwu, 2020). Other proactive measure taken by the state government was the inauguration of nine-man COVID-19 Committee with a mandate to monitor and investigate suspected case(s) of the infection in the state. The complete fumigation and closure of all markets in the state indefinitely, prohibition of all forms of public gatherings such as marriages, funeral ceremonies, churches and mosques services (Oyekanmi, 2020).

Secondly, the observable mental health consequences of the pandemic have triggered fear about the uncertainty arising from job losses, homelessness and insecurity. The lockdowns have increased the number of persons who hitherto had no problem developing substance use problem. The isolation and social distancing have limited access to treatment and aftercare of drug users, who are among COVID-19 patients in isolation centers (Agwogie, 2020).

#### **Key Discernable Issues in Owerri Municipal Health Centers in Owerri Municipal**

Owerri Municipal has at least four major hospitals namely: Federal Medical Center, Imo State Specialist Hospital, First Concept Hospital and Chidicon Medical & Diagnostic Hospital. According to Nkwopara and Sobowale (2020) the Federal Medical Centre was first established as a Colonial dispensary in 1903, almost more than 100 years now. However, the infrastructural growth of the hospital has since outstripped the clientele of the medical outfit. According to Adebawale (2020) the first cases of COVID-19 in Imo State were reported by Nigeria Centre for Disease Control (NCDC) on April 26,

2020. The State Chairman, COVID-19 Prevention and Control Task Force, reported that of the 662 cases of COVID-19 in the state, Owerri Municipal has 268 infected patients followed by Owerri West (Ogugbuaja and Olaniyi, 2020).

The current state of health centers within the Municipal cannot adequately respond to the growing needs of those already infected patients, especially those requiring admission into Intensive Care Units (ICU). An inventory of ICU among the major health care centers within Owerri Municipal would reveal dilapidated and obsolete health facilities available for the management of infected patients. The COVID-19 pandemic has exposed the need for policy makers to dedicate resources for the provision of health care facilities such as beds, ventilators, equipped laboratories, etc. It was in a bid to address the decay state of the health facilities that equipment and supplies worth over N290 million was donated to Federal Medical Center, Owerri by Coca Cola Nigeria Limited (Nkwopara and Sobowale, 2020).

#### **Water Supply**

One of the guidelines recommended by WHO and NCDC is regular washing of hands with clean, running water and soap (WHO, 2020 and NCDC, 2020). These guidelines appear quite simple but are somewhat out of the reach of the common man. The reason is not far-fetched. The public water supply system in the Owerri Municipal has been grossly inefficient, despite the fact that Nigeria is a party to the United Nations Declaration of the Right to Water. The declaration entitles everyone living in Nigeria to sufficient, affordable, safe and acceptable water for personal and domestic consumption. As at the time of conducting this research residents in Owerri Municipal still lack access to clean, running water, with which to regularly wash their hands to prevent themselves from contracting COVID-19 infection as recommended. What obtains mostly is water vending, which has become a thriving business especially among urban dwellers. The study observed that residents were of the view that their only sources of water for domestic use are 'shallow'



boreholes sunk by their landlords or underground wells. As a matter of fact, the study noted with keen interest that there is no such thing as public water supply in the whole of Owerri Municipal.

### **Housing Issues**

Housing is universally recognized as one of man's most basic needs. Housing condition in Owerri Municipal is at risk, as perception of quality houses keep deteriorating. Architectural quality of houses is alienating and bleak, while byelaws are being violated by building authorities, low quality houses/apartment are rented out by landlords without considering the negative effects to end-users and environments. Due to Nigeria government's concern on the vast transmission of the pandemic, COVID-19 has significantly emerged as indispensable housing issues, which requires urgent attention (Afolayan, 2020).

This is why the outdated housing standard policy vis-à-vis non-compliance to housing standard create a need for rethinking and promoting quality standard in housing environment, towards sustainability and the curb of the spread of dreaded COVID-19 infections. According to Adediran et. al (2020), self-isolation or restricting of individual in their homes can change their habitational dynamics, politics and rhythms which can stimulate several issues such as putting lives in danger, especially when the environment of the houses is not habitable. The linkage between health and housing cannot be more visible than it is, across Nigeria. WHO (2020) ascertained this by justifying the essential needs of housing in promoting health and productivity. This factor is significant to the curbing of COVID-19 spread as well as other diseases, as lack of quality and adequate affordable housing in Owerri Municipal can delay or abate the swift containment of the pandemic.

### **Urban Waste Problem in Owerri Municipal**

Wastes are inevitable consequences of human activities. They are either a by-product of initial production processes or they arise when objects or materials are discarded after they have been used (Madu, 2001). According to Organisation of Economic Cooperation and

Development (OECD) (2003) waste is defined as any materials that are not prime products (that is, products produced for the market) for which the generator has no further use in terms of his/her own purposes of production, transformation or consumption, and of which he/she wants to dispose. In Owerri Municipal, the most important threat to urban activities originates from solid waste from domestic and industrial substances. Furthermore, solid wastes are substances which are regarded as useless by the producers and thereafter disposed. These human wastes are great contributions of environmental health hazards. Inadequate solid waste disposal in Owerri Municipal could lead to contamination of edible products thereby increasing the burden of COVID-19 infection among the urban residents. One of the most significant challenges to waste management in Owerri Municipal is the absence of solid waste storage facilities such as waste bins with tight fitted covers in some houses and along the street. This negligence on the side of waste producers often leads to littering of refuse within the urban center. A critical observation shows that the solid waste situation in Owerri Municipal—particularly collection, recycling and disposal has invariably become more risky for waste workers and urban dwellers following the outbreak and spread of the COVID-19 infection since April 26, 2020 when, the infection was first reported in the state.

Although, state governments and its waste management agencies among which includes: Palmet Waste Management, Coastal Geo- Environmental have had to engage their services to avoid the public health and safety risks and pollution associated with accumulation of waste. Regrettably, with little or no use of employee safety measures, waste workers are often exposed to varying degrees of hazards in their quest to protect their area of jurisdiction and earn their living. Thus, government strategies to manage solid wastes during COVID-19 infection in Owerri Municipal are inadequate and call for a transformative urban planning.



### **COVID-19: An Opportunity to Rethink Urban Planning for Transformation in Owerri Municipal**

The term planning is used in so many different ways that there is often confusion about what people actually mean when they talk about planning. Nevertheless, despite the surfeit of existing definitions, some sort of working definition of planning is necessary for the purposes of this paper. Planning means choosing between many desirable activities because not everything can be done at once (Nyerere, 1969). Planning also involves making choices between alternative course of action: in other words, about alternative ways of achieving the same objective (Onah, 2015). According to Agrawal and Lal (1997) planning refers to an activity which is comprised of ends or aims which society wants to achieve, and the means with which these ends are sought to be achieved. This implies that the ends and means are thus laid out before the action starts or before the plan is put into consideration. Planning is characterized by three key essential elements. One is that planning involves a conscious activity. It is an activity which is thought out in advance of the onset of action. The second element is that the plan-activity is time-bound. This takes place over a stipulated period of time. For example we take the first National Development Plan in Nigeria which was meant to last for period of two years. The third element of the plan action is that it is related to a specific geographical area as in the case of Owerri Municipal. Our understanding of planning will be based on the third element of planning which has to do with a specific geographical area.

Urban planning as the name implies refers to planning with a spatial or geographical component, in which the general objective is to provide for the spatial structure of activities which in some way is better than the pattern existing (Hall, 1974). This view of urban planning is not without critics. Indeed, Hall envisages human geography as the basic discipline of “urban and regional planning” while others conceive of geographical space (or land use) as too limited a concept to provide even a proper

comprehension of special planning. According to Amujiri (2001) urban planning by whatever description it may be given is an emerging paradigm and provides a broader view of relationship between the use of space and the consequences of using it in a particular fashion. It is an important administrative action aimed at sustaining and improving the aesthetic nature of a geographical area or a town. Urban planning is a technical and political process concerned with the development and design of land use and the built environment, including air, water, and the infrastructure passing into and out of urban areas, such as transportation, communications, and distribution networks.

However, urban planning for transformation in Owerri Municipal within this turbulent time is critical for managing COVID-19 infectious diseases. According to the state Chairman of COVID-19 Prevention and Control Task Force, Owerri Municipal had the highest number of 268 cases in the state followed by Owerri West (Ogugbuaja and Olaniyi, 2020). The old master plan of Owerri Municipal requires to be updated in this time of the outbreak of the novel COVID-19 pandemic. This is renewed to meet increasing challenges of the physical layout of human settlements, with the primary concern of public welfare, which includes sanitation, protection and use of the environment as well as effects on social and economic activities.

In a time of COVID-19, slums, flooding and informality are critical due to the sector’s vulnerability to transmission. It is challenging to deploy testing and contact tracing, as well as adhering to social distancing guidelines within the towns that make up Owerri Municipal among which include: Umuorioronjo, Amawon, Umuonyiche, Umuodu and Umuoyima. Many residents within these communities lack access to basic essential services such as portable water, adequate sanitation, housing and healthcare. And, given that this semi-urban centers characterised by unregulated economic activities including uncontrolled hawking in daily open markets resulting to overcrowding is impeding



social and physical distancing rules especially in Amawom and Umuoyima community. There is no doubt that change at this point in time is urgently needed. COVID-19 will be the wake-up call to spur the consolidation of existing and formal structures to becoming more responsive to managing social crises.

Another area of concern is that, there are geographical and economic imbalances in urban planning in Owerri Municipal. Infectious diseases often have cascading effects on adjoining communities and street with functional relationships to strategic locations. COVID-19 has affected both Owerri and their adjoining towns and communities including , Amawom community which has limited investment in critical infrastructures such as health, housing and other essential social services.

Given the disruptions to the supply chain between its neighbouring towns and the adjoining communities due to the pandemic, it is about time that Owerri Capital Development Authority (OCDA) and other stakeholders prioritize urban planning to reflect these imbalances. A poorly managed relationship between these five communities and adjoining towns can create inequality that may lead to unhealthy urban-regional interdependencies, environmental damage and unmanaged waves of health crises. These can have ripple effects across the urban-rural spectrum. Therefore, planning for urban transformation should be more resilient by addressing imbalances in producing a more integrated city-regional planning around health, economies, transport networks and food production. There should be street re-designs that free space for pedestrians and active mobility can help meet several public health objectives, notably through physical activity and the reduction of pollution exposure in the environment.

Moreover, public health matters should be considered in urban planning in Owerri Municipal. Health outcomes traditionally do not drive urban planning practice in Nigeria and Imo State in particular. In our study, urban green spaces are used as an example because the COVID-19 pandemic has highlighted their importance in

managing emergencies. Authors' observation suggests that urban centers are rapidly losing their green spaces. This is due to, among other things, poor urban planning. The management systems for local green space must improve. Integrating larger open spaces within the urban fabric allowing towns to implement emergency services and evacuation protocols during health crises. Although COVID-19 has profoundly transformed urban life globally, this research provides cautious optimism of its potential in managing future health crises in Nigeria and Owerri Municipal in particular. Going forward, urban planning in our study area needs to reflect the aspirations of urban residents and address multiple spatial inequalities, including access to better spaces in times of a pandemic.

#### **Theoretical Framework**

The study adopted the institutional theory propounded by North (1990). According to North (1990) institutions are the humanly devised constraints that structure political, economic and social interaction. The key idea behind institutionalism is that much organizational action reflects a pattern of doing things that evolves overtime and becomes legitimate within an organization and environment. Institutional theory recognize that organizational participants can be constrained by institutional arrangements that limits the choices available, restraining certain patterns of resources allocation and prohibiting certain courses of actions (Powell and DiMaggio, 1991).

The institutional theory is found credible in ascertaining how the outbreak of COVID-19 can facilitate urban planning for transformation of Owerri Municipal in Imo State of Nigeria. The key idea behind institutionalism is that much organizational action reflects a pattern of doing things that evolves over time and becomes legitimate within an organization and environment. Most urban centers in Nigeria are just like any other municipal area councils in a developing country which has not benefited from the contributions made by Town Planning Authorities because management via planning



authorities, use policies made for them, to achieve different goals that relate to physical planning. Master planning as a policy tool and technique to solve physical planning problems in Owerri has failed. Furthermore, public institutions established for urban land administration, planning, development and governance are often weak and inefficient (Aluko, 2011). This institutional restriction becomes a constraint by not supporting and facilitating the infrastructure delivery to promote sustainable urban planning as observed by absence of adequate master planning frameworks to address waste disposal, portable water supply, decent housing among others. In addition, the approval of a plan by Owerri Capital Development Authority (OCDA) and others government agencies may have to go through lengthy procedures and could then be incorporated into the relevant section of a plan. Owerri Municipal is the fastest growing cosmopolitan town in Imo State but lacks an institutional framework for the effective implementation of any plan to control development. This calls for why the planning services must be restructured and replaced especially within this period of uncertainty occasioned by COVID-19 to ensure the safety of urban dwellers.

### **Concluding Remarks**

The study reviewed how the outbreak of COVID-19 pandemic could provide pathway for urban planning for transformation of Owerri Municipal through its planning institutions. The study argued that the current COVID-19 public health crisis would facilitate a proactive and updated replacement plan and a new beginning in a new Owerri Municipal. Achieving this will involve an orderly urban environment where the implementation template should include the details of utility constructions, housing designs and development towards compliance to the new normal. The State Government should also make adequate efforts to provide means of ferrying collected waste from the point of collection to the final dump site; this will help to reduce the common practices of indiscriminate dumping of refuse by residents. There is

need for sustainable well-planned urban center that minimize health risks from ill-equipped health care centers, dilapidated and physical inactivity, while also mitigating future disease outbreak.

### **References**

- Adebowale, N. (2020). “Coronavirus: Imo records first case as Nigeria confirms 87 new infections”. *Premium Times*. April 26.
- Adediran, A.O, Oladejo, S.O, Akinwande, T.O, Samuel-Soma, M.A & Samuel, M. (2020). Housing quality standard and COVID-19 pandemic: A call for attention in Nigeria. *Journal of Science, Engineering, Technology and management, 1* (1), 44-53.
- Adogun, P.O.U, Uwakwe, K.A, Egenti, N.B, A. P. Okwuoha, A.P & I. B. Nkwocha, I.B. (2015). Assessment of waste management practices among residents of Owerri Municipal Imo State, Nigeria. *Journal of Environmental Protection, 6*, 446-456.
- Afolayan, A. (2020). Housing as the fundamental link to tackling COVID-19 in Nigeria. Retrieved 31 October-2020, from Unilag Centre for Housing Studies.
- Agrawal, A.N. & Lal, K. (1997). *Economics of development and planning*. (3<sup>rd</sup> Edition). New Delhi: Vikas Publishing House PVT Ltd.
- Agwogie, M.(2020). “ISSUP Nigeria worries over mental health of patients”. *Vanguard*. May 23.
- Aluko Ola (2011). Development control in Lagos State, an assistant to space standard for urban development. *African research review, International Multi Disciplinary Journal*, Ethiopia, 35 (5).
- Amujiri, B.A. (2001). Urban planning in Nigeria: Problems and remedies. In Ezeani, E.O and



- Nnanta, N.N (Edited), *Issues in Urbanization and urban Administration in Nigeria*. (Pp.401-416). Jamoe Enterprises Nigeria.
- Brauer, M., Zhao, J.T, Bennitt, F.B. &Stanaway, J.D. (2020). Global access to hand washing: implications for COVID-19 control in low-income countries. *Environmental Health Perspectives* 128 (5): 057005-1–057005-6. Accessed October, 31.
- DiMaggio, P.& Powell, W. (1991). Introduction. In Powell, W. and DiMaggio, P. (Ed.). *The new institutionalism in organizational analysis*. (Pp.1-38).Chicago: University of Chicago Press.
- Fodio. S.U. (1978). *Handbook on Islam Ihsan*. Great Britain: The Chaucer Press Ltd.
- Hall, P. (1974). *Urban and regional planning*. Penguin Books.
- Johns Hopkins University (2020). Live update: Global COVID-19 cases exceed 46 million; England to enter second lockdown. Available at: <https://www.cgtn.com/special/Global-COVID-19-cases-top-19-7-million-U-S-cases-exceed-5-million.h>
- Madu, I.A. (2001). Urban solid waste problem in Nigeria. In Ezeani, E.O and Nnanta, N.N (Edited), *Issues in Urbanization and urban Administration in Nigeria*. (Pp.126-140). Jamoe Enterprises Nigeria.
- Nigeria Centre for Disease Control. (2020). COVID-19 case update: 162 new cases confirmed. Available at: <Available at [www.ncdc.gov.ng](http://www.ncdc.gov.ng)>.
- Nkwopara, C.& Sobowale, R. (2020). Nigeria: FMC Owerri Gets N290 million equipment upgrade. *Vanguard*. March, 4
- North, D. C. (1990) *Institutions, institutional change, and economic performance*. Cambridge: Cambridge University Press.
- Nwachukwu, V.(2020). “ COVID-19: Gov.Uzodinma donates palliatives to Churches in Imo”. *Health*. April 4. Available at : <https://nnn.com.ng/covid-19-gov-uzodinma-donates-palliatives-to-churches-in-imo/>
- Nyerere, J.K I. (1969).Second five-year plan for social & economic development,1969-74. Dares Salaam; Government Printer, Vol.11.
- Ogugbuaja, C. & Olaniyi, S. (2020). COVID-19: Fear grips Imo residents as cases rise to 268. *The Guardian*, June 27.
- Ohia, C.,Bakarey, A.S., & Ahmad, T.(2020). COVID-19 and Nigeria: Putting the realities in context. Available at <[www.elsevier.com/locate/ijid](http://www.elsevier.com/locate/ijid)>.
- Onah, F. O. (2015). *Human resource management* (4<sup>th</sup> Edition). Enugu State, Nigeria: University of Nigeria Press, Ltd.
- Onyekwelu,C.A. (2001). Urban growth and patterns in Nigeria. In Ezeani, E.O and Nnanta, N.N, *Issues in Urbanization and urban Administration in Nigeria* (Edited). Jamoe Enterprises Nigeria. Pp47-60.
- Organisation of Economic Cooperation and Development (OECD). (2003). *Glossary of Statistical Terms: Waste*. Available at : <http://stats.oecd.org/glossary/detail.asp?ID=2896>
- Oyekanmi, S. (2020). ‘Covid-19 Update in Nigeria’. *Nairametrics*. May 25.
- Robert Muggah & Katie Hill (2018). African cities will double in population by 2050. Here are 4 ways to make sure they thrive. Available at: <https://www.weforum.org/agenda/2018/0>



6/Africa-urbanization-cities-double-population-2050-4 ways.

World Health Organization (2020). “Coronavirus Disease (COVID-2019) Situation Reports.” OurWorldInData.org . Available at: <https://ourworldindata.org/coronavirus-source-data>>.

Worldometer (2020). Countries in the world by population. Available at: <https://www.worldometers.info/world-population/population-by-country/>>.