

Effects of COVID-19 on Urban Housing Delivery and Affordability in Nigeria

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Abstract

The world economy has been experiencing serious disruption due to the advent of COVID-19 pandemic impacting at both local and global scales. Inquiries, studies and researches are currently ongoing to analyse the impacts COVID-19 has on various sectors of the economy so as to enable stakeholders in policy making understand and come up with adequate plans to develop resilience to the pandemic and ensure sustainability of the several affected sectors in the economy. Housing is one of the fundamental needs of man and has no doubt been affected by the advent of COVID-19 pandemic, especially in the aspect of housing need, space requirement, housing security, housing affordability and security of tenure, housing/property investment and construction. This study reviews various existing studies on the current effects and potential impact of COVID-19 pandemic on different facets of urban housing, and its effects on urban housing delivery and affordability, with a view to identifying fissures or gaps as well as filling the identified gaps and create platform for further studies and contribution to knowledge and academic research. Preferred Reporting Items for Systematic Reviews and Meta-Analyses was adopted with a total of 140 documents retrieved and 79 eliminated using adopted criteria leaving out 61, out of which 30 not addressing subject matter in the study area were excluded from findings; thus, 33 documents including PhD dissertations, MSc. thesis, peer reviewed journal articles, books, proceedings, technical reports and other published articles directly relevant to this paper work were succinctly reviewed. Results show COVID-19 has impacted housing need, space requirement, housing security, housing affordability, real estate investment and housing development. The study also shows that residential, hospitality, retail, offices, industrial and healthcare sectors have different experiences of COVID-19 impact as some are positive like in the case of industrial and healthcare while others are negative.

Keywords: COVID-19, economic impact, Nigerian economy, pandemic, urban housing development

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1.0 INTRODUCTION

COVID-19, the contemporary global pandemic is ravaging the world and has held global economy to stand still (Adediran et al., 2020b). Though these economic impacts are still unfolding, the housing sector is having its fair share, and these impacts may last for a long period of time due to behavioural changes and technological advancements (KPMG, 2020). The coronavirus disease known as COVID-19 has affected 216 Countries with 34,481,669 confirmed cases, 1,027,653 confirmed deaths and 25,670,615 recoveries and currently has no known cure (WHO, 2020a), making it an imminent challenge to global economy. Due to government restrictions such as lockdown, travel restrictions and physical distancing, the world is already facing a profoundly changed economic situation, as company closures and thousands of new unemployed may lead to a recession in 2020 (Ernst & Young, 2020). The spread of COVID-19 is already exacerbating a pre-existing global housing crisis as housing is central in the battle against COVID-19, and without adequate housing, it is impossible to carry out physical distancing and good hygiene practices. Looking at similar event in the past, evidence indicates that the economic effects of the 1918 influenza pandemic were short-term but had a permanent influence (Garrett, 2007). Evidence from historical outbreaks also shows that major epidemics cause significant but short-lived declines in house prices, and smaller declines in rent prices (Francke & Korevaar, 2020).

Any disease outbreak has significant impact on local economies as well as every other facets of investment from which housing investment across the globe cannot be excluded. For instance, in 2002, the outbreak of SARS (SARS-Cov) in China so greatly impacted the Asian continent that tremendous negative impacts were recorded, in the social, health and economic spheres. It was estimated that, the Asian economy was affected to the tune of between 12-18 billion USD from tourism, travel as well as retail industries and real estate. Also, the Ebola outbreak in 2015 caused an estimated loss of 2.2 billion USD in Gross Domestic Product (GDP) in three West African countries of Guinea, Liberia and Sierra Leon (Daily Sabah, 2020). Logan and Mammen (2020) posited that although there is distress in the housing market sectors which rely on trade, tourism or energy, the impact of COVID-19 may be broadly moderate on real estate. Also, COVID-19 and its attendant consequences at this material time cannot be ascertained immediately as the virus wave is not yet over.

The behaviour of COVID-19 in sub-Saharan African countries such as Nigeria is not the same as what is experiential in other countries of the world, as mortality is low when compared to other advanced nations like USA, Britain, Spain, Italy, Germany and Russia (WHO, 2020b). Thus, there is a need to explore the rationale behind this. The study of the impact of COVID-19 is relevant in the housing sector because housing development and delivery encompasses at least four phases including: Preparatory stage (land acquisition, legalization/regularization of tenure, preparation and approval of residential building plans); Production (sourcing for housing finance, construction and upgrading of new and existing buildings); Distribution/Marketing (sales or lease of residential buildings); and Servicing (housing maintenance) (Zaiats & Zaiats, 2018), which are all affected by COVID-19. Housing also affects human health and evidence from Nigeria suggests that most of the people that died of COVID-19 had existing health problems such as multiple organ failure, hypertension and diabetes (NCDC, 2020a). It is therefore imperative for scholars to study the current situation and develop knowledge on how COVID-19 impacts the urban housing sector, especially in nations of the Global South like Nigeria which is the premise this study is based, and how global economy can become resilient to the challenges of the pandemic as scientists continue on the quest to finding a cure for the virus.

■2.0 CONCEPTUAL ANCHOR AND RELATED LITERATURE

In understanding the impacts of COVID-19 on urban housing in Nigeria, conceptual reviews are essential and these include urban housing and the impacts of COVID-19 on urban housing in terms of delivery and affordability, considering: vulnerability, resilience and healthy housing. This section presents these conceptual issues to understanding the stand point from various relevant literatures.

2.1 Urban Housing

Housing is a permanent structure for human habitation (Listokin & Burchill, 2007). It is however more than shelter as it encompasses social services and utilities that makes a community or neighbourhood a liveable environment (FRN, 1991). Housing is a critical and indispensable component of social, economic and health fabric of any nation (Jiboye, 2009), and the inseparability of housing from the environment has made it a great component that can be influenced by health, efficiency, social behaviour, taste, satisfaction, productivity, and welfare of individuals and groups (Jiboye, 2011).

Housing can be classified based on purpose as; market housing, non-market housing, multi-family dwelling, ground-oriented dwelling, emergency shelters, secondary/accessory dwelling unit, single unit dwelling, transitional housing and social housing. Since the advent of urbanization, housing took a new turn from sparsely dispersed to mass housing in areas of larger populations which brought about the concept of urban housing referred to as housing developed in urban areas (Ahiauzu, 1985). Given the positive correlation between population density and the 1918 influenza mortalities, urban areas are likely to have greater mortality rates than rural areas (Garrett, 2007). It has been assumed by many that contagion risk of COVID-19 increases with density (the number of people per unit of land), but that is not necessarily true; the risk is actually associated with crowding (the number of people within an enclosed space, such as a vehicle or house) (Litman, 2020). However, urban and rural areas are more connected today and this may decrease the difference in mortality rates between cities and rural areas. These uncertainties make it imperative to understand the impacts COVID-19 may induce on the housing sector of the economy.

2.2 COVID-19 Impacts on Urban Housing

The impacts brought about by COVID-19 can be narrated in terms of vulnerability, resilience and health in the context of urban housing. The impacts extend to income reduction and in some cases, total loss as companies started downsizing as production processes have to be put to a halt especially in the housing sector. Some companies and organisations adopted work from home methods, however; other institutions such as schools are in temporary shutdown. Office leasing has decreased sharply, and although, determining how COVID-19 will affect the use of office space in the future is too soon now, there is however, a trend towards the direction of decrease in office space per employee (Goldman Sachs, 2020).

2.2.1 Residents Vulnerability to COVID-19

Housing undisputedly plays a major function in the period of COVID-19 pandemic because it is where people live and work on a daily basis, (Ren et al., 2020). However, residents are vulnerable to the impacts of COVID-19 as it strikes without prior preparation. Based on the report of Infectious Disease Vulnerability Index (IDVI) in 2016, twenty-two countries in African region are more vulnerable to infectious diseases out of the total twenty-five countries in the world (Lone & Ahmad, 2020; WHO, 2020b). Vulnerability is a condition of exposure and susceptibility to impacts (Sutanta et al., 2010), and urban residents are vulnerable in several ways. Apart from inability to continually meet rental responsibilities, especially for those living in rented apartment due to lockdown, where individuals can no longer work to meet their responsibilities, the impact of COVID-19 on housing are more. A major preventive measure of the spread of this pandemic is physical distancing otherwise known as social distancing, and isolation, which can only be achieved effectively where there is safe and adequate housing (Huang et al., 2020; Ren et al., 2020). Quarantining and isolating people in their homes can cause behavioural change, change in habitational dynamics and politics of the home which presents various challenges (Rogers & Power, 2020). Some studies have presented cases of growing domestic violence in some cities due to prolonged lockdown periods, income losses and stress since prolonged stay at home is unusual for some individuals, especially when they are not in good terms with their family (Taub, 2020; Townsend, 2020). Report has also shown that emotional violence accounted for (25%), physical violence (23%) and sexual abuse accounted for (5%) on the issue of domestic violence in Pakistan (UNODC, 2020).

It is significant to note that even as the issue of stay at home is prevalent in various cities, there are several people who are homeless, and the idea that one can go home in many cases is simply not an option. Some other people live in indecent homes especially in slums-where it

is difficult to observe safety measures against the novel virus (Adediran et al., 2020a; UN-Habitat, 2020a). In some cases, people across all ages are neglecting the lockdown and still move freely to meet ends need (Afolayan, 2020). Corburn et al. (2020) stated that settlements, especially the informal ones within the Global South countries such as Nigeria are seen to be the least prepared countries for these extreme events of COVID-19 pandemic. This is because, essential services and basic needs such as water supply, effective waste management and adequate housing are practically inadequate and, in most cases, non-existent. Furthermore, overcrowding due to space constraints in slum areas made practicing physical distancing and quarantine a difficult task with likely rapid rate of infection in a rapid manner. The resultant effect of this condition is exacerbated health problems and further spread of the virus (Hastings, 2018; Ingber et al., 2018), as high population densities in slums may accelerate transmission due to: household overcrowding, poor living conditions, access to health services, reliance on crowded transport services and working in the informal sector (Baker et al., 2020).

2.2.2 Health Issues of COVID-19 in Sub-Saharan Africa

The first case of COVID-19 on the African continent was confirmed in Egypt on the 14 February 2020, whereas, the first case in sub-Saharan Africa was confirmed on the 27 February 2020 in Lagos, Nigeria. It was confirmed to have been brought into the country by an Italian who made international trip from Italy to Lagos on the 25th of the same month (NCDC, 2020b; WHO, 2020a). The population and health systems of Africa made it significantly different from other continents experiencing COVID-19. This is due to demographic structures where the average age of Africa's population is 19.7 years which contrasts sharply with other continents like Asia for example with 38.4 years and Europe with an average age of 43.1 years (Kazeem, 2020). COVID-19 has been confirmed to affect the older ages of population more than that of the younger ones; as such, age can be a factor affecting the spread of the virus. Although studies exemplified that in Nigeria, residents who live in indecent homes, especially in slums do not observe safety measures against the novel virus (Adediran et al., 2020a; UN-Habitat, 2020a). This condition also accommodates older people far away from the cities which reduces the spread. Grandparents and great-grandparents, across social categories, receive care in their village homes, away from the city, and among their kin (Omanga & Ondigo, 2020).

2.2.3 Urban Resilience to COVID-19

Resilience is a system's ability to resist, absorb, accommodate and subsequently recover from effects of hazard in an efficient and timely manner including restoration of basic structures and systems disrupted (ISDR, 2009). Based on this definition, resilience is considered in term of effects of hazard, but when an actual disaster occurs, it will be referred to as coping capacity (van Niekerk, 2011). Coping capacity refers to the ability of people, organisations and systems, using available skills and resources, to face and manage adverse conditions such as hazards, emergencies or disasters (ISDR, 2009). The World Health Organization (WHO, 2020a), presented strategic preparedness and response plan for COVID-19 in February 2020 which include the following:

- i. Limiting transmission from one person to another;
- ii. Preventing further international spread from the epicenter which is China;
- iii. Early identify(sic), isolate, and care for patients;
- iv. Reduction of transmission from animal source;
- v. Addressing crucial unknowns such as clinical severity, extent of transmission and infection, treatment options, and acceleration of development of diagnostics, therapeutics, and vaccines;
- vi. Communicating critical risk and event information to all communities;
- vii. Minimizing social and economic impact through multisectoral partnerships.

These strategies were acted upon, but some countries were not proactive enough, which made the disease spread out of China with devastating effects on countries such as Italy, France, UK and USA.

Notwithstanding the policy, actions appear generic in compliance with standard World Health Organization (WHO) protocols of: lockdowns, testing and contact tracing, isolation and physical distancing. The choices are not easy when it comes to adapting them to country specific contexts. Countries exhibited varying stages of institutional capacity, resilience, inclusiveness and vulnerabilities. Nigeria, is adjudged as high vulnerability entity. Scientists advocate flattening the curve which in some cases mean longer lockdowns. Lockdown fatigue and restlessness of the vulnerable population occasioned by economic hardship compelled the government to ease lockdown with possible consequence of increase in infections (Moti & Vambe, 2020). As suggested by Nancy (2020), COVID-19 pandemic re-induced togetherness in people's memory, and engaging people in the act of interdependence and solidarity (Quarshie, 2020; The Care Collective, 2020), during the pandemic and perhaps beyond the pandemic. As a result, building resilience to COVID-19 is a gradual process that can be achieved with joint efforts especially in the housing sector.

2.3 COVID-19 and the Nigerian Economy

Gondwe (2020) estimates a regional average of about 5% in public revenue losses in Africa, with total merchandise exports contracting by about 17%. There was a shrink in the Nigerian economy at the second quarter of 2020 by 6.1% compared to 1.9% growth in the first quarter period (Trading Economics, 2020). This has been the first recorded contraction of the Nigerian economy since the first quarter of 2017 and the steepest in sixteen years, acknowledged to be induced by global crude oil price fall and nationwide lockdown to contain COVID-19 pandemic. There is a decline of 6.6% in the oil sector of Nigeria in the second quarter of 2020 after rising in the first quarter by 5.1% (Ozili, 2020). Furthermore, non-oil sectors also declined since the third quarter of 2017 (-6.1% vs 1.6%), and -49% vs 2.8% in first quarter, in

transportation and storage; -40.2% vs -3% in accommodation and hospitality; -31.8% vs 1.7% in construction; -16.6% vs -2.8%. Also, the GDP of Nigeria shrank by 5% after a 14.27% increase in the previous year (Trading Economics, 2020).

Millions of Nigerians observing the COVID-19 lockdown lack the food and income that their families need to survive. Although, people providing essential services such as food, medical supplies and the media were exempted from total lockdown to operate for four hours daily, other formal and informal sector workers were in total lockdown. Naira now fluctuates between ₦420/\$1 and ₦480/\$1, petroleum pump price have been adjusted more than once during the pandemic (from ₦145 to ₦125 and ₦125 to ₦162) and electricity tariff increased from ₦25 to ₦66/megawatt. At present, inflation rate is more than 14% and the number of unemployed and those that lost their jobs as a result of COVID-19 has increased drastically. The Nigerian central bank adopted some economic policies that can be accommodative by offering ₦3.5trillion loan support to some sectors, but the effort did not prevent economic crisis as fear of contracting COVID-19 disease that was spreading very fast at the time did not allow people to engage in their economic activities (Ozili, 2020).

3.0 METHODOLOGY

3.1 Study Area

Nigeria is the largest country in West Africa located between Benin and Cameroon at latitude 4°16' and 13°53' North and longitude 2°40' and 14°41' East. Nigeria is bordered in the South by approximately 800 kilometers of the Atlantic Ocean, in the west by the Republic of Benin (773 kilometers), in the North by the Republic of Niger (1,497 kilometers) in the North-East by Chad (87 kilometers) and in the East by the Republic of Cameroon (1,690 kilometers). Nigeria is a relatively large country which occupies about 923,768 square kilometers. It is the most populous country in Africa and indeed among the black nations of the world with a population increase from 15.9 million people in 1911 to 140 million people in 2006 based on the 2006 National Population Census and estimated to be 200 Million people in 2019 based on National Population Commission's estimates.

Nigeria has the 30th largest economy in the world, but vulnerable due to overdependence on oil revenue, which is dwindling. There was a 2.2% GDP growth in 2019 (IMF, 2020), but due to COVID-19 outbreak, the GDP is estimated to fall by -3.4% in 2020 and subsequently pick up to 2.4% in 2021, but this estimation is subject to global post pandemic recovery. The population of Nigeria is currently estimated to be about 200 million people, this is projected to be up to 730 million people in 2100. This population increase is of a great concern as over half of the inhabitants live below poverty line and there is a great social and economic struggle of inequality and high rate (6.1%, in 2019) of unemployment (World Bank, 2020).

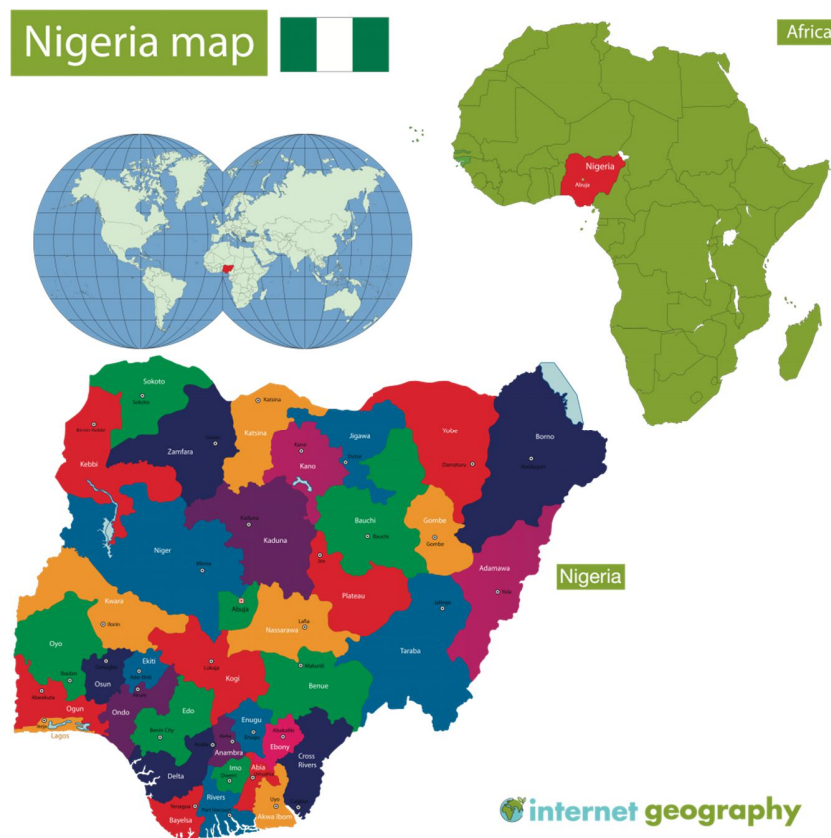


Figure 1 Locational map of Nigeria
(Source: Internet Geography, 2020)

3.2 Methods

This study is conducted using Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) method of literature review. Data were collected from secondary sources. Online data sources are electronic databases using google and google scholar search engines, all other texts were obtained from academic and research institutions that have conducted research relevant to this study. Both published and un-published literatures related and relevant to this study were carefully and intensively searched, reviewed and duly acknowledged. As soon as all literatures were identified, criteria for inclusion and exclusions were set using keywords. Studies that meet inclusion criteria were included while others were excluded. The key words for literature search include: *COVID-19, Economic Impact, Housing, Nigeria Economy, Pandemic, and Urban Housing Development*. A total of 140 documents were retrieved; 71 which does not fall within the theme making up the keywords or are not eligible were eliminated leaving the scholar with 61 most relevant documents that include: PhD theses, MSc. dissertations, peer reviewed journal articles, books, proceedings, and technical reports.

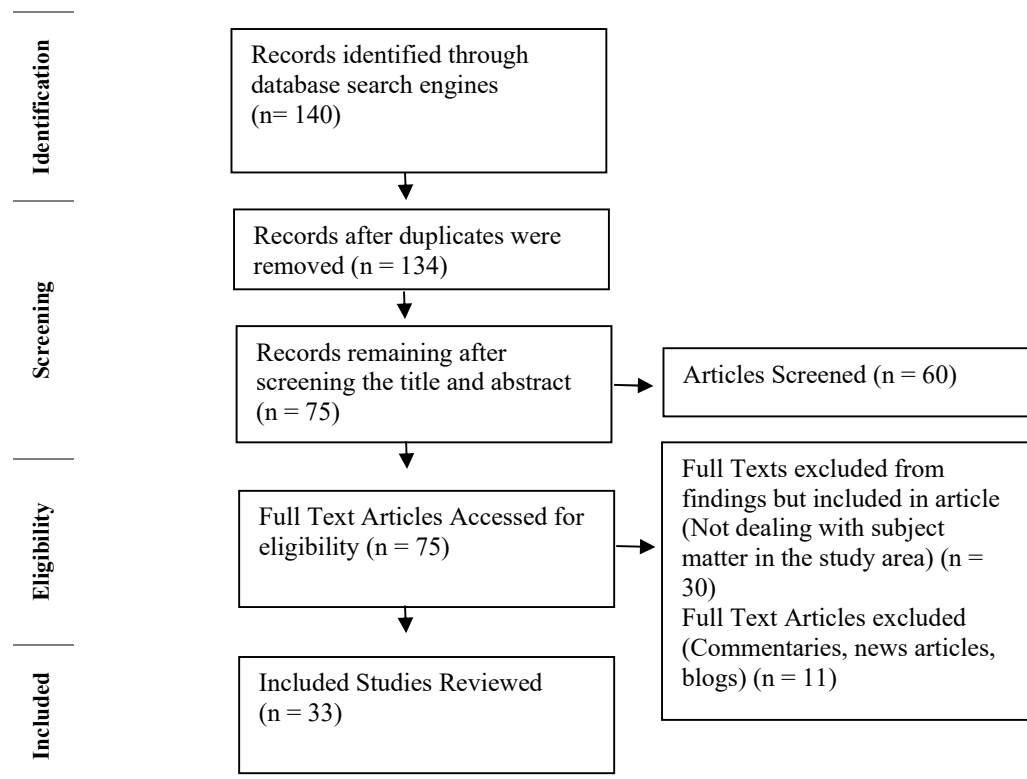


Figure 2 PRISMA flow diagram for the scope of review process

4.0 FINDINGS AND DISCUSSION

As COVID-19 continues to linger, studies are ongoing and behavioural changes in the world economy is causing several impacts that can directly affect the housing sector. Such impacts are induced from various factors such as: increase in virtual technology demand and supply, social distancing, lockdown, increased loss of employment and government restrictions such as travel bans. This section presents the various ways COVID-19 has impacts on urban housing.

4.1 Impact Virtual Technology on Housing Need

There has been a rapid emergence and expansion of technological advancements in innovations including World Wide Web (WWW), video conferencing, social media and other technologies in the past twenty years, which has become part of lives, as human become more dependent on them (Bacova et al., 2011). A study by Iranmanesh (2010), conducted on how virtual technology use has increased and can change human behaviour and how the change in behaviour can affect housing environments show that, people tend to spend more time in one place when virtual technology such as TV or Smart phones are available for use. The advent of lockdown and social distancing measures due to COVID-19 also created reasons why people should be more dependent on technology, especially the virtual social networks such as Zoom, Skype or Teams, for work from their home or other isolated places. This behavioural change however can alter the rate at which individuals require housing space; office spaces for example may no longer be required for businesses that can be conducted online using virtual multimedia.

Experiments of working from home currently practiced by companies has become a factor that may change the behavior of users, vis-à-vis office space market demand. This is due to stay at home restrictions that can lead to reduction of office space renting in the future, exposing investors to risk (Francke & Korevaar, 2020). Public places such as churches that have also taken their services online may also receive lesser number of worshippers compared to previous times in their buildings (Musa, 2020). Schools are also working towards institutionalizing e-learning to reduce the number of students in classrooms (Adeoye et al., 2020), this will also affect use of school buildings. There is however a need to conduct a critical analysis on the extent to which use of virtual technology can affect the investments in the housing sector. This condition however may present a potential opportunity for organisations to embrace technological advancements in their businesses, or on the contrary affect other companies requiring physical presence of their employees to function effectively in an adverse manner.

4.2 Impact of Physical Distancing on Space Requirement

As urbanisation continues with 55% of the world's population living in cities, occupying 2% when compared to global land mass, and with expected increase to 68% by 2050 (UN-DESA, 2018). Mixed-use housing or compact housing is becoming predominant to reduce the pressure on urban land for housing purpose (Grant, 2002). A mixed-use housing in this context is a development that can accommodate several significant revenues generating land uses where their proximity reduces trip distances and also reduce the use of automobiles thus making people engage in walking or cycling or use of mass transport system as required (Bacova et al., 2011; Grant, 2002). As a result, it is not just a multi-storey development having different uses.

Physical distancing and isolation are measures predominantly prescribed to prevent the spread of COVID-19 (WHO, 2020), and it requires separation of spaces. Distance in space per head of individuals in public spaces such as churches or mosque or office directly translates into more space requirement or lesser users of exiting space. This goes against the concept of compact housing or diversity in function of urban dwelling whereby spatial distance is reduced, directly translating to physical proximity (Bacova et al., 2011). Reflecting on urban space is therefore a topical issue to be considered in research as physical distance will require more space for housing thereby inducing not just physical constraint, but economic and social constraints which in turn induces the consideration of vertical urban growth.

4.3 Impact of Lockdown on Housing Security

Physically, housing security entails planning and building using gated community or fortress concepts that will communities or households to be secluded from each other using physical barriers such as fences thereby, isolating individual houses from the broader neighbourhood (Blakely & Snyder, 1997). Apart from the general purpose of protecting residents from possible intruders, gated communities give a sense of social or economic class to the residents, differentiating them from their adjoining urban environment (Bacova et al., 2011). This is also supported by Landman (2000) who argued that crime prevention is not the only reason for gating communities. Gating communities however do not always prevent crime, as such, another effective way of crime prevention situationally is by contributed efforts of the residents to collectively act and protect their neighbourhood by themselves otherwise known as 'neighbourhood watch'. This was birthed by the theory of 'defensible space' postulated by Newman which emphasizes on allocation of environmental protection to the people's responsibility (Landman, 2000).

This concept of defensible space is adopted in urban areas especially houses where gates are not available. However, neighbourhood watch is still adopted in communities for reinforced security even with gated houses. The prevalence of lockdown measures increased poverty and hunger since daily wage earners can no longer go to work to meet their daily food needs. Criminals however staked on these excuses and invade peoples' homes to steal food or money. Report from a study conducted in Lagos Nigeria submitted that issues of insecurity were prevalent as crime rate increases across the state daily, and so subjecting the residents into night guards' duties where they need to engage in shift work to secure their environment (Adediran et al., 2020b). This effect of COVID-19 on housing security has prompted the question of whether physically securing urban housing is more effective with gates and fences or community watch.

4.4 Impact of Unemployment on Housing Affordability

Housing is affordable when households do not pay more than 30 percent of their income for rent or purchase of their home including utilities (O'Dell et al., 2004). Households that pay more are considered as cost burdened as they may find it difficult to pay for other non-housing needs such as food, clothing, transportation, medical care and childcare (HUD, 2012). An affordable home is the most preferable and safest place to dwell in times of pandemic (Litman, 2020). COVID-19 impact has however been immediate and severe on residents who have low income, and these impact is especially worse on tenants who has faced job and income loss that will prevent them from paying rent, buying food and accessing health care (Afolayan, 2020).

The impact of COVID-19 on jobs in form of rendering the employed unemployed, especially for informal workers, will result in mortgage defaults and rental arrears which may eventually lead to forced evictions (UN-Habitat, 2020a). An estimated \$7-12 billion in rental payment support is needed to assist hourly workers for every month of COVID-19 related closures (Bordia et al., 2020). This effect will be unequal as it will be felt greatest in areas with sizeable renter population and employment concentrated in leisure and hospitality, transportation, manufacturing and construction sectors (Bordia et al., 2020). Study has shown that about 30.5% of households in Kenya were unable to pay for their rent as and when due as a result of loss of jobs due to COVID-19 (UN-Habitat, 2020a). In other places, residents are already facing forced evictions as some landlords are bent on increasing their rents rates or sell off their housing investment even in the midst of crises and tenants' risk (Rogers & Power, 2020).

A study exposed the rate of unemployment during the COVID-19 outbreak which in turn affects housing affordability by individuals especially tenants (Adesoji, 2020). The study showed that out of the 1,950 households surveyed in Nigeria, 42% of the respondents who

were working before the outbreak were no longer working the week preceding the interview for reasons related to COVID-19, and further breakdown showed that the poorest households reported the highest share of Nigerians who stopped working (45%), while 35% of the wealthiest households were also affected (Adesoji, 2020). High inflation rate has led to the increase in the prices of imported and locally made building materials, overall construction cost, prices of newly constructed and upgraded houses and house rents. Most tenants (e.g. private school teachers, informal sector economy operators and company workers) are vulnerable to forced eviction and relocation. Some may also become homeless thereby making them more vulnerable to COVID-19. The economic effects of COVID-19 on housing development also affects the following issues: housing requirement, housing need, housing demand and housing affordability.

Below is the table representing the recent tenancy schedule of a property in different locations under the management portfolio of a renowned registered estate manager in Minna, Niger State, Nigeria.

Table 1 Tenancy schedule and rental default by tenants as a result of COVID-19
(Source: Ade-Adekunle and Associates)

Serial No	Name of the Tenant (withheld)	Property Occupying	Rent/Amount Payable	Tenancy	Tenancy Expiration Date	Remark
1	P	2 bedroom semi-detached bungalow	₦350,000:00 (\$902.20)	Yearly Tenancy	14 th July 2020	Rent not yet Paid (defaulted)
2	Q	Room and parlour self-contained	₦160,000:00 (\$412.43)	Yearly Tenancy	30 th March 2020	Paid part payment
3	R	2 bedroom detached bungalow	₦365,000:00 (\$940.87)	Yearly Tenancy	15 th April 2020	Rent not paid
4	S	3 bedroom bungalow with a room boy's quarters	₦450,000:00 (\$1,159.97)	Yearly Tenancy	25 th April 2020	Rent not yet paid
5	T	4 bedroom duplex in a well fenced compound	₦500,000:00 (\$1,288.86)	Yearly Tenancy	20 th March 2020	Made part payment
6	U	A room and parlour self-contained	₦150,000:00 (\$386.66)	Yearly Tenancy	28 th February 2020	To be evicted
7	V	3 bedroom flat on two floors	₦375,000:00 (\$966.64)	Yearly Tenancy	12 th June 2020	Made part payment
8	W	5 bedroom duplex with neighbourhood shopping mall	₦600,000:00 (\$1,546.63)	Yearly Tenancy	30 th May 2020	Requested extension through the Rent Tribunal to pay by December 2020
9	X	2 bedroom bungalow standalone housing	₦300,000:00 (\$773.32)	Yearly Tenancy	25 th April 2020	Rent not yet paid
10	Y	A room and parlour self-contained	₦175,000:00 (\$451.10)	Yearly Tenancy	1 st March 2020	Rent not yet paid
11	Z	2 bedroom flat on two floors	₦285,000:00 (\$734.65)	Yearly Tenancy	5 th July 2020	Paid part payment

4.5 Impact of Government Restrictions on Real Estate Investment

Evidence from historical outbreaks shows that major epidemics cause notable but temporary fall in housing prices which also affects rental prices (Francke & Korevaar, 2020). This decline in prices are most substantial just at the early stage of outbreaks at the epicenters of the epidemic outbreak. The most appropriate and reasonable explanation for the temporary but large decline in housing prices is that, epidemics or pandemics as the case may be usually increases risk as a result of fear of the unknown, uncertainty in events and disruption of the economy (Francke & Korevaar, 2020). Even though it was widely believed that SARS distressed the already weak Hong Kong housing market, Wong (2008) observed that there was a low figure of decline in the housing market which was contrary to the predictions of behavioral and psychological economics theories. As of 19 April 2020, about 89% of the United States apartment households paid their rent which is only slightly lower than the 93% of rent payment rate in 2019, but, COVID-19 added to the slow rate of housing leasing with 36% lesser housing lease as at April 2020 when compared with the rate in 2019. More residents are however intending to renew their rent instead of vacating their premises which preserves occupancy of the properties (Goldman Sachs, 2020).

The SARS epidemic presented a unique tenet to understanding how associated emotional behavior in the case of extreme events affects housing market (Wong, 2008). This condition is exemplified in decisions as purchase of apartments or acquiring mortgages are being postponed as a result of individual uncertainties. Also, developers are postponing and limiting their offers over selling at loss (Francke & Korevaar, 2020). It may however be that prices of apartments will continue to grow on the long run due to continued urbanisation induced by growing digital economy despite the potential short fluctuation. The key question is how the development companies will react to the

situation. Another key problem of research is whether the impact of COVID-19 on urban housing investment due to fear of the unknown event will decline as the fear of the virus decline.

The impact of COVID-19 in real estate investments in Nigeria cut across the various uses such as: residential, hospitality, retail, offices, industrial and healthcare (Estate Intel, 2020). In the case of residential, there were handful of rental concessions and demand for higher rates of rent reduced while the demand for lower rents remained stable. For hospitality, there was extremely low occupancies and low revenues from events due to restrictions. Uncertainties slowed down decision making and office space usage was completely ceased except for essential workers. In the industrial sector, there was an increase in demand for goods and storage facilities to stock up foods and essentials in case of extreme events. Although the healthcare market in Nigeria is undeveloped, the increase in demand for healthcare increased the performance of healthcare real estate investments.

4.6 Impact of Government Restrictions on Housing Delivery

The aftermath of COVID-19 pandemic on the Nigerian economy has negative effects on housing production. COVID-19 is not at this stage totally rendering housing projects impossible to be completed, however, it delays project completion time as supply chains are being interrupted. In some cases where projects stopped, there is intention to continue in subsequent time (Yadeta, 2020). During the lockdown, state residential land supply and housing loans supplied by mortgage institutions and commercial banks came to a halt, no security of tenure was granted, no building plan was approved and housing construction and upgrading were also negatively affected.

Construction companies and property developers who rely on imported materials or foreign labour may have their plans disrupted as a result of international travel restrictions, as such there will be slowdown in developmental process (Yadeta, 2020). These slowdowns due to restrictions will apparently keep development critical deadlines unmet, and thus increase cost and further issues in investments sustainability (Abinraj, 2020). Also, when government restriction of movement was reduced and people are allowed to return to work, it was seldom for construction workers because the issue of physical distancing and washing of hands while at work must be observed which is difficult, making them vulnerable to the disease. As long as there is currently no cure for the virus at the moment, the new ways of life and work practices has become the (new) normal which must be keenly adhered to. For instance, Triacta Construction Company, Dantata & Sawo Construction Company and Julius Berger Construction Company, all in Federal Capital Territory (FCT) Abuja, Nigeria, have several units of housing constructions which they were supposed to deliver to their clients on or by mid-2020. But the unfortunate outbreak of COVID-19 had hampered the completion of the projects and delivery as and when due in line with the contract and project delivery date became just a dream.

Table 2 Evidence of hindered or uncompleted housing project as a result of COVID-19
(Source: Oladele and Company)

Construction Company	Location of the Project	Number/Unit of the Housing Project	Supposed Completion Date	Inspection of Completed Project Date	Proposed Commissioning/Delivery Date
Triacta CC	Apo Village Abuja	World class standard Neighbourhood ICT Centre	March 2020	June 2020	September 2020
Dantata & Sawo CC	Prince and Princess Estate, Abuja	250 units of 2 and 3 bedroom bungalow	June 2020	August 2020	September 2020
Julius Berger CC	Gwarinpa Estate Extension, Abuja	57 units of 4 and 5 bedroom duplex, prototype	June 2020	September 2020	November 2020

5.0 CONCLUSION AND RECOMMENDATION

This paper has presented the various driving phenomena that exacerbate the impacts of COVID-19 on urban housing delivery and affordability which cuts across virtual technology demand and supply, social distancing, lockdown, increased loss of employment and government restrictions. Also, some substantial available evidences have made it clear that, COVID-19 has negative impact on urban real estate housing, but with this intensive research, governmental and private efforts can be made to ameliorate the situation despite continuous existence of the COVID-19. The study shows that residential, hospitality, retail, offices, industrial and healthcare sectors have different experiences of COVID-19 impact as some are positive like in the case of industrial and healthcare while others are negative. Key areas that should be considered for studies in the housing development field has been discussed which include: critical analysis on the impact of increased use of new virtual technologies on housing investment; reflecting on urban space and analyzing physical distancing can be suitably practiced in housing development considering how spatial distance require increased urban space for housing posing further constraints in form of economic, environmental and regulatory challenges; understanding whether physically securing urban housing is effective with gates and fences or community watch in case of criminal activities during pandemic outbreak that requires lockdown; the extent to which the pandemic affects housing affordability; understanding whether the impact of COVID-19 on housing investment due to fear of the unknown event will decline as the fear of the virus decline; and analysing the new normal of housing industries.

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