SAU Journal of Management and Social Sciences *https:journals.sau.edu.ng/index.php/sjmas*
(ISSN: 2550-7302),
Vol. 6, Number 2, September 2021 (Special Issue on COVID-19 Pandemic).

Attitudes of Uyo Telecommunication Subscribers on Data Usage during COVID-19 Lockdown in Nigeria

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Abstract
The researchers examined attitudes of Uyo telecommunication subscribers on data usage during COVID-19 lockdown in Nigeria. The objectives of the study were to: Find out how often telecom subscribers used data during COVID-19 lockdown, to what extent the lockdown influenced their data usage during lockdown and identify challenges encountered in usage of data. The survey research method was adopted. Findings revealed that the telecom subscribers used data often during the lockdown. The lockdown influenced subscribers' data usage to a large extent and poor internet services by service providers affected their data usage during the lockdown. It recommended that service providers should make service available for internet users and ensure that subscribers enjoy what they paid for.

Keywords: Telecommunication, Subscribers, Data, COVID-19, Lockdown

Introduction
In November 2019, the novel coronavirus (COVID-19) was discovered in Wuhan, China. A few months after its discovery, the virus became a global pandemic affecting almost every country in the world; with the global economy and sources of livelihoods being heavily impacted. Due to measures to contain the pandemic, many countries instituted a shutdown of their economies. In Nigeria, the Federal Government through the first address of the President, Muhammadu Buhari and the accompanying legislation specifically called for an initial two-week lock down of activities in Lagos and Ogun State as well as the Federal Capital Territory, Abuja where the incidence of the infection has been highest across the country, starting 11 pm on Monday, March 30; 2020. It was later extended to May 4; 2020, as well as the imposition of curfew from 8 pm to 6 am across Nigeria. In a broadcast address on Monday 13; April, 2020, Buhari said, "it has become inevitable to elongate the current restriction of movement" that was set to expire later in the day. It is a matter of life and death," Buhari said of the nation's response. The impacts of any untimely end to the lock down action are unthinkable." Following this, several other States

imposed different variants of the same measure, to the extent that most of the States across Nigeria were effectively in partial or full lock down mode at a time (Ezegwu, Chime-Nganya & Obichili, 2020).

The lockdown compelled Nigerians to work from home. According to Akiyode-Lawson (2020), internet data connection is providing to be a human necessity as some Nigerians are now spending more time online and using more mobile data since the enforcement of lockdown in several states of the country to curb the spread of the coronavirus pandemic. With the shutdown of offices, event places and Churches, it seems likely that a lot of users that have been offline shifted online. Video conferencing and streaming platforms like Zoom, Meet, Skype, and Youtube have become more popular. In terms of eCommerce, Jumia revealed that several merchants requested to be on boarded on Jumia platform. Besides established players, Fintech startups like paystack and Flutter wave launched their own eCommerce platforms (Paul, 2020). A look at Airtel Nigeria's financials will revealed that revenue from data grew by almost a billion naira, from #45.6 billion in the first quarter of 2020 (January to March, 2020) to #46.4 billion in the second quarter 9April to June). According to MTN Nigeria quarter 2 report, customers used more than 3,000 terabytes (equivalent of 3 million GB) of data in visiting various sites (Okwumbu, 2020).

However, irrespective of who bore the cost of the increased data demand, employees had to stay online to work, attend to customers and clients, attend meetings, e-conferences and seminars. The lockdown also saw teachers being compelled to go online. Whereas the usual teaching system in Nigeria would have required students seated in the classroom with the teacher physically present. Private schools took their lessons online during the lockdown. Some ran the entire term curriculum and classes, and even took their examinations online at the end of the term. Churche services, seminars and other activities were held online. In all these, data were used to surf the internet. Thus, it is against this background this study examined attitudes of Uyo telecommunication subscribers on data usage during COVID-19 lockdown in Nigeria

Statement of the Problem

The COVID-19 pandemic has led to an inevitable surge in the use of digital technologies due to the social distancing norms and nationwide lockdowns. People and organisations all over the world have had to adjust to new ways of work and life. With the spread of the pandemic, almost all regions have implemented lockdowns, shutting down activities that require human gathering and interactions - including colleges, schools, malls, temples, offices, airports, and railway stations. The lockdown has resulted in most people taking to the internet and internet-based services to communicate, interact, and continue with their job responsibilities from home. Internet services have seen rises in usage from 40 % to 100 %, compared to pre-lockdown levels. Video-conferencing services like Zoom have seen a ten times increase in usage, and content delivery services like Akamai have seen a 30 % increase in content usage (Branscombe, 2020).

During the lockdown, there was a perceived increase in internet activities both on regular channels and on less suspected platforms. Despite the perceived negative effects of the pandemic, it appears several Nigerians increasingly subscribed to the internet during the lockdown in April 2020, and the subsequent easing the following month. According to data from the Nigerian Communications Commission (NCC), internet subscriptions in Nigeria increased to ~140.7 million, up by ~4.9 million since March, 2020 (Paul, 2020). Though this seems to be a

considerable increase, the numbers are similar to previous records so far in 2020. During the full lockdown in the month of April 2020, internet subscribers hit a massive 2.5 million; and with similar numbers in May, the numbers went to almost 5 million. The working-from-home approach due to movement restrictions triggered by the COVID-19 pandemic resulted in a surge in the usage of mobile internet devices that require SIM cards to function. However, there is lacked of empirical data to find out how telecom subscribers used data during the COVID-19 lockdown in Nigeria. This study will fill that literature gap by examining attitudes of Uyo telecommunication subscribers on data usage during COVID-19 lockdown in Nigeria. How often telecom subscribers did used data during COVID-19 lockdown in Nigeria? What are the challenges telecom subscribers encountered in the use of data during lockdown in Nigeria?

Objectives of the Study

The objectives were to:

1. Find out how often telecom subscribers used data during COVID-19 lockdown
2. Ascertain the extent COVID-19 lockdown influenced telecom subscribers' data usage.
3. Identify challenges telecom subscribers encounter in use of data during the lockdown in Nigeria.

Review of Related Studies

Shah, Nogueras, Woerden & Kiparoglou (2020) in a study "the COVID-19 pandemic: A pandemic of lockdown loneliness and the role of digital technology. The researchers explored the role of digital technology in tackling lockdown loneliness amid the pandemic. The researchers' qualitative research method was adopted. The researchers recommended that the most disadvantaged and vulnerable people who are more prone to lockdown loneliness are provided with access to digital technology so that they can connect socially with their loved ones and others; this could reduce loneliness resulting from social distancing and lockdowns during the COVID-19 crisis.

De, Pandey & Pal (2020) carried out a study on impact of digital surge during COVID-19 pandemic. The researchers noted that workplace monitoring and technostress issues will become prominent with an increase in digital presence. Online fraud is likely to grow, along with research on managing security. The researchers concluded that regulation of the internet, a key resource, will be crucial post-pandemic. Feldmann, Gasse, Lichtblau, Wagner, Wichtlhuber, Dietzel & Tapiador (2020) in a study title "The lockdown effect: Implications of the COVID-19 Pandemicon Internet Traffic. The researchers employed survey research method. They found that due to the COVID-19 pandemic, many governments imposed lock-downs that forced hundreds of millions to stay at home. As a result of these measures, internet traffic of residential users increased, in particular, for remote working, entertainment, commerce and education. In turn, traffic demands in the Internet core shifted as well. The researchers found that increases in applications such as Web conferencing, VPN, gaming, messaging that people use when at home. While many networks see increased traffic demands, in particular, residential users, others see major decreases, e.g., the in/out ratio of the educational network switched.

Vargo, Zhu, Benwell & Yan (2020) examined digital technology use during COVID- 19 pandemic: A rapid review. The researchers relied on secondary research method. The researchers examined 281 articles. They found 28 various forms of technologies have been used, ranging

from computers to artificial intelligence. They also found 8 different populations of users are using these technologies, primarily medical professionals, and generalised types of activities are involved, including providing health services remotely, analysing data, and communicating, and 35 various effects have been observed, such as improved patient outcomes, continued education, and decreased outbreak impact. The reviewed works showed that there is no study, especially in Nigeria that has investigated attitudes of Uyo telecommunication subscribers on data usage during COVID-19 lockdown in Nigeria. This is the major gap which this current study attempt to fill.

Theoretical Framework

This study is anchored on technological determinism theory. Technological determinism theory was propounded by Karl Marx who believed that change in technology is the primary influence on human social relations and cultural practices. Marxist submission has found relevance in recent times where the idea that fast –changing technologies alter human lives in an unprecedented manner. This theory was later developed and elaborated by Marshal McLuhan in 1964 which views technological determinism theory as the idea that technology has the ability to drive human interaction and create social change.

McLuhan's idea laid emphasis on the impact that ICT have on users, institutions and society in general. Technological determinism theory has been concluded to be the belief in technology as a key growing dynamics in a society. It is also seen as an approach that identifies technology as a central causal element in social change. Karl Marx believe that technological progress leads to newer ways of production in a society and this ultimately influences the cultural, political and economic aspects of a society thereby inevitably changing society itself" (Asemah, Nwammuo & Nkwam-Uwaoma, 2017). In relating the technological determinism theory to this study, it is clear that advancement in media technology have made it possible for Nigerians staying at home during COVID-19 lockdown to use their technology enabled gadgets such as; smart phones, laptops and mobile phones to engage in various activities while at home. This, no doubt facilitated interactivity and communication among telecom subscribers.

Methodology

The researchers used survey method and the questionnaire was the research instrument used to elicit data. The survey is very useful when the research hinges on involving two or more issues. The population of this study consisted of all the residents of Uyo, which was projected by the National Population Commission in 2016 to 399,789. The sample size for this study was 400. This was arrived at using Taro Yamane formula for finding sample size of a finite population.

The multi-stage sampling procedure was used in this study. At first stage, the population was first categorised into 8 clusters comprising major streets and their surrounding feeder roads. This was to ensure easy access and to remove any classification or cluster error. At the second stage, fifty (50) respondents were purposively selected from each of the clusters to make a total 400 respondents. The main goal for using purposive sampling technique at this stage was to ensure that researchers focused on particular characteristics of a population that are of interest, which will best generate answers to research questions. While at the third stage, convenience sampling technique was used to distribute copies of research questions to available adults (between 18 years and above). The mobile nature of the respondents justified this method,

especially those who were available and accessible during the time of the study were given copies of the questionnaire. Data were collected through the questionnaire and computed in simple percentages (%) in tables.

Table 1: Sample Size

Cluster	Sample Size
Oron Road cluster	50
Ewet Housing Estate Cluster	50
Aka Road Cluster	50
Itam Cluster	50
Wellington Bassy Way Cluster	50
IkotEkpene Road Cluster	50
Nwaniba Road Cluster	50
Udo-Udoma Road Cluster	50
Total	**400**

Data Presentation and Analysis

The percentage method was used in data analysis and presentation. The researcher administered 400 copies of questionnaire to the target population and out of this number, 392 were retrieved and 6 were rendered invalid for answering multiple choices in a question. Thus, 386 copies of questionnaire were analysed and presented below.

Table 2: Showing how often Telecom Subscribers used Data during COVID-19 Lockdown in Nigeria

Variables	Frequency	Percentage
Very often	109	28
Often	194	50
Occasionally	67	18
Not at all	16	4
Total	**386**	**100**

Table 2 indicates how often telecom subscribers used data during COVID-19 lockdown in Nigeria. The data show that most of 194 (50%) respondents used data often during COVID-19 lockdown in Nigeria.

Table 3: Showing the Extent COVID-19 Lockdown Influence Telecom Subscribers' Data Usage

Variables	Frequency	Percentage
To a large extent	174	45
To an average extent	119	31
To a little extent	72	19
Not really	21	5
Total	**386**	**100**

Table 3 reveals the extent that COVID-19 lockdown influence telecom subscribers' data usage. From the data above, 174 (45%) respondents said that COVID-19 lockdown influenced their data

usage. The implication is that many of the respondents used data to a large extent.

Table 4: Challenges Telecom Subscribers encounter in the use of Data during Lockdown in Nigeria

Variables	Frequency	Percentage
Poor internet service	174	45
High cost of data	119	31
Unsteady power supply	72	19
Inexplicable depletion of data	21	5
Total	**386**	**100**

Analysis of data from the above table 4 revealed that 45% of respondents said that poor internet services by service providers affected their data usage during the lockdown. This implies that many of respondent were affected by the challenge of poor internet service by the service providers during lockdown in Nigeria.

Discussion of Findings

Analysis of data gathered from this study revealed that 50 % of telecom subscribers used data often during COVID-19 lockdown in Nigeria. The findings agree with the application technological determinism theory in the study. Technological determinism theory explains the role of technology in facilitating human interaction and creating social change in the society. The frequent use of data by Nigerians during the COVID-19 lockdown was made possible via the adoption of Information and communication Technology devices such as; smart phones, laptops, mobile phones and even the data subscription via network providers. All these technological devices and products enabled Nigerian to engage in online activities often during the lockdown. The technological innovations which led to the emergence of social media platforms have redefined the manner in which respondents disseminate and receive information/knowledge amidst the COVID-19 lockdown. Also, Karl Marx believe that technological progress leads to newer ways of production in a society and this ultimately influences the cultural, political and economic aspects of a society thereby inevitably changing society itself" (Asemah *et al* 2017).

Also, the findings support Okwumbu's (2020) discovery that as soon as the realities of the lockdown set in, many companies set about activating the remote working framework. To do this, several applications came into use and employees had to set about adapting to the. Working from home definitely played a role in increasing people's data needs. A previous report from Nairametrics had some workers admitting that their data consumption tripled because of the demands of working online all day. Findings also revealed that 45% of the respondents said that COVID-19 lockdown influenced their data usage to a large extent. The findings agree with reports from Nigerian Communication Commission (NCNC) as reported by Paul (2020), during the lockdown in the month of April, 2020, internet subscribers hit a massive 2.5 million and with similar numbers in May, the number went to almost 5 million.

The findings also showed that 45% of respondents said that poor internet services by service providers affected their data usage during the lockdown. The findings corroborated that of Ezegwu *et al* (2021) and Eze *et al* (2020) who found that lack of quality internet services and lacked of information super-highway broadband is affecting the use of internet for virtual learning in Nigeria.

Conclusion and Recommendations

The researchers examined attitudes of Uyo telecommunication subscribers on the data use during COVID-19 lockdown in Nigeria. The findings from the study revealed that the majority of the telecom subscribers used data often during COVID-19 lockdown in Nigeria. It was also discovered that the continuous COVID-19 lockdown influenced subscribers' data usage to a large extent. The researchers concluded that many of respondents were affected by the challenge of poor internet service by the service providers during lockdown in Nigeria. Based on the findings, the following recommendations are hereby given:

1. Nigerians explore the opportunities offered by internet to their useful benefits.
2. The service providers should make service available for internet users and ensure that subscribers enjoy what they paid for.
3. The electricity providers should make service available for people to use. This will facilitate socio-economic growth and development t in Nigeria.

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