An Empirical Analysis on COVID-19: Lockdown Impact on Nigerian Economy

Hayatuddin Hamza Safiyo1*, Ahmed Ibrahim Mohammed1, Muhammad Bello Jakada2, Umar Musa Kallah3, Bashir Usman Mika’il4
1Department of Banking and Finance, Faculty of Management Science, Federal University, Dutse, Jigawa State, Nigeria
2Department of Business Administration, Faculty of Management Science, Federal University, Dutse, Jigawa State, Nigeria
3Department of Economics, Madras University, Chennai, Tamil-Nadu State, India
4Department of Actuarial Science, Faculty of Management Science, Federal University, Dutse, Jigawa State, Nigeria
*Corresponding Author: haysh01@gmail.com

Abstract
Objective – Objective of this study is to analyze the lockdown effect on economic activities in Nigeria as the lockdown response measure to COVID-19 pandemic claim to pose a serious and potentially long term socio-economic threat to individuals, households, businesses as well as public sectors in Nigeria.

Design/methodology – This study considered four regions in Nigeria (Northwest, North-Central, South-South and Southeast) and adopted a quantitative research approach which entails systematic evaluation of individuals’ behavior towards an unprecedented economic shock and their response to the manner in which the situation might unfolds by lifting the lockdown measure in Nigeria. This is achievable with a systematic random sample and a well-structured survey questionnaire. All these regions experienced the imposition of lockdown measure by their respective state authorities.

Results – The results indicated that most socio-economic challenges including job loss, increase social vices, rise in poverty level, fall in economic activities, as well as fall in the level of GDP faced by individuals was not a resultant of the lockdown. Consequently, authority’s inefficiency was also challenged in spite of their efforts to mitigate and control the emerging economic consequences faced by households during the lockdown periods.

Recommendation - The study recommends that lifting of lockdown would be the best action for the government to take for socio-economic resilience. The study also revealed that both public and individuals need to establish democratic preferences, and trust on health professionals or experts. Further to this, government should decide on effective measures needed to contain the continuous spread of the virus especially through development of research based and healthcare institutions.

Keywords: Pandemic, Lockdown, Economic Challenges, Government, COVID-19.

1. Introduction
The world experienced a serious pandemic termed the novel coronavirus (COVID-19) which emerged in the early times of December 2019 in Wuhan City of China and reported 41 cases with seven severely ill and thereby claim one death between 8th December, 2019 and 2nd January, 2020 (Buheji & Ahmed, 2020; World Health Organization, 2020). The virus has been a disturbance to the global system which all, both advance and developing countries reported several number of cases and deaths in which Africa is not in isolation. Africa recorded the first case of COVID-19 in Egypt on 14th February, 2020 (WHO, 2020). Nigeria is the most populous African country as revealed in the study of Aziz and Mohammed (2018); and Mohammed, et. al. (2020) confirmed an estimated population which stood at 206,139,000 by January 1st 2020 and ranking seventh most populous country in the world. Nigeria recorded its first
case of COVID-19 in Lagos State on 27th February, 2020 (Nigeria Centre for Disease, 2020). The State is second in terms of population with over 12,550,598 estimated settlers and the most commercial hub in Nigeria (National Bureau of Statistics, 2020). The city is characterized with high travel connectivity including flight, buses, train and sea-ports especially for commercial and governmental purposes. Rodrigues-Morales et al., (2020) revealed that the movement to and from commercial and/or populated places is the key associate for the transmission of COVID-19.

Notwithstanding, the authority’s perpetual decision to interface the burden associated with COVID-19 pandemic is heightened by political concerns (Qi, Du, Liu, Zhao, & Dong, 2020) as also evident in Nigeria. Thus, a swift and appropriate response is required during a period of an extraordinary global health crisis that inflicts agony on both socioeconomic and political status of people (Dev & Sengupta, 2020; Hasanat et al., 2020; Kim, 2020). Despite the major challenge on appropriate decision to take, the country as part of its COVID-19 response strategies released advisories and statements through NCDC on how to carter for the affected individuals, and also help to slow the spread of the virus across population. Consequently, the concerned authorities tend to contravene civil liberties and imposing exceptional powers to enforce lockdown through the basic and commonly adopted measures like lockdown, social distancing and later contact tracing approaches were initiated (Nigeria Centre for Disease, 2020). Thus, the concerned authorities have no option rather to impose exceptional powers to enforce lockdown on citizens in order to prevent the contaminations of COVID-19. However, the measure taken by the authority resulted in the increased poverty rate, collapse of educational system, loss of income, increase social vices in Nigeria as well as other developing countries.

Departing from the above background, this study intends to introduce a suitable macroeconomics measures to be consider by the policy makers in other to encounter economic implication of the disease. This study introduces an alternative of economic recovery through Quantitative economic approaches and quantum test. This is in line with the study of Julius, Nuugulu, & Julius (2020), Buheji & Ahmed (2020), Vahidi & Jallili (2020), Rodrigue -Morales et al., (2020), Amat, Arenas, Falco-Gimeno, & Munoz (2020) and Kim (2020) that the corona virus pandemic is an extremely complex public health issue that requires effective management and control by technocrat-ic government through macroeconomics approach. Furthermore, this research was focused on the adverse effect of the lockdown measure and its economic impact on the society. Dev & Sengupta (2020) in their study on the Impact of COVID-19 on the Indian economy believe that the timing and severity of the health emergencies as well as that of the lockdown signifies the weight and level of economic impact on the economy. However, the active engagement of relevant authorities both state and private towards providing knowledge-based institutions to carter for social, legal and economic security of individuals in the state was consider (Geda, 2020). Therefore, analysis of relative impact of the economic shock induced by the lockdown response measure to COVID-19 pandemic, and as well finding and suggesting effective recovery strategies are the primary purpose of this study. Specifically, the objective of this study are as follow:

1) To analyze lockdown effect on economic activities in Nigeria
2) To analyze Government Intervention during lockdown periods in Nigeria
3) To determine Government Measures to revive economic activities in Nigeria

The study only considered the effect of lockdown response to coronavirus as well as its economic implications without given concern to other active measures like the social distancing, regular washing of the hands, and contact tracing. As part of the study originality, Buheji & Ahmed (2020) and Amat et al. (2020) emphasized the tendencies of policy makers to provide solutions that will save humanity from future crisis and thereby considering the relative importance of the inclined economic shock by the pandemic. Also, the socio-economic needs of the less privileged and vulnerable
citizens during future global and national health crisis or emergencies was addressed by Buheji & Ahmed (2020). Inoue & Todo (2020) and Bonaccorsi et al. (2020) assert that imposing lockdown especially in densely populated region would indirectly effects economic activities of that region and though affects other locations twice compared to the former; and thereby causing increase in fiscal cost.

Subsequently, part two of this paper will dwell in reviewing previous researches, data analysis and result discussion is focused on part three. The final section of this paper discusses its conclusion and appropriately identified policy recommendations to be adopted by policy makers and for further research based on the following objectives of the study.

2. Review of Literature

According to an article in World Economic Forum, two of the biggest single-day declines in the history of Dow Jones Industrial Average are from March of 2020; during COVID-19 outbreak. Previous studies suggest links between human health hazards and marketing. Henson & Mazzocchi (2002) find that trade of equity prices and marketing of firm’s goods and services, agriculture, agribusiness and agro-allied industries and manufacturers are negatively affected in U.K when governments announced a possible link between the Virus (Bovine Spongiform Encephalopathy) and human health. Vahidi & Jalili (2020) undertook a study on why the existence of COVID-19 and adopted a qualitative research approach in the forms of exploratory research where their findings revealed that the novel coronavirus has led to a great rise in the level of poverty, loss of income, as well as non-access to essential needs by vulnerable households especially in low- and middle-income countries.

Julius et al. (2020) on the economic impact of COVID-19 on Namibian economy evident that the lockdown measures imposed on various sectors of the economy resulted to a decrease in Gross Domestic Product (GDP). According to Hasanat et al. (2020) who evaluated the impact of coronavirus on Malaysian e-business revealed that the emergence of the COVID-19 pandemic has led most medium and small scale businesses to shut down and thus leading to a fall in the economy’s GDP especially as a result of lockdown measures inflicted by the government. Goodman-Bacon & Marcus (2020) adopted difference-in-differences approach in their urge to identify the causal effects of COVID-19 policies and to come up with a better solution to economic and social welfare, revealed that policy implementation in different situations provides better outcome for the best response to be adopted in order to control the spread of the novel coronavirus rather than implementing specific response to every situation. Bairoliya & Imrohoroglu (2020) adopted the overlapping generations model to mimic the United States economy and explored the consequences of lockdown policies. Findings from the study confirmed that the general population is considered for the lockdown measure thereby resulting in a drastic fall in GDP and increase cost of businesses instead of considering the lesser population who are prone to the risk of contracting the disease and who have underlying health conditions for effective self-isolation. The lockdown measure deny many individuals to their businesses, exposing many to job loss, as well as leading many to starvation and livelihood deterioration Buheji & Ahmed (2020) and thus, introducing many to a new poverty position. Alvarez, Argente, & Lippi (2020) describe the economic consequences of managing a favourable lockdown policy in a linear economy. The study considered data associated to the health crises and the economic implications of lockdown and affirms that the absence of testing for the virus inflicts more cost on lockdown management and thereby increasing economic hardships. Lau et al. (2020) considered pre and post-lockdown confirmed domestic and international cases to examine the relationship between flights connectivity and the rate at which the virus (COVID-19) is spread.
result proves a pronounced decline in economic growth rate and raise in COVID-19 cases due to lockdown imposition in China.

Arora, Bhaukhandi, & Mishra (2020) use computational experiments to replicate the short term effect of lockdown in forty-four countries including all major economies. They postulate that despite its restriction on movement, social, economic, and industrial activities, the lockdown serve as a vaccine to the natural environment and thereafter help the environment to rebound. Goolsbee & Syverson (2020) observed the economic consequences of COVID-19 using data on customer visits to businesses across 110 different industries in (location). They affirmed that the drastic fall in economic activity in the state started earlier before the imposition of lockdown order, and thus was rather an achievement than an ill decision. Karin et al. (2020) considered a cyclic schedule model to investigate a tenable approach to exit the lockdown, and provide means for continuous economic activity. A 4-day work and 10-day off strategy was adopted and the findings revealed that the situation of the health crises could be suppressed particularly on a relaxed lockdown order rather than a total lockdown order. Gonzalez-Eiras & Niepelt (2020) assert that the lockdown response order to COVID-19 pandemic inflicted a severe output loss and consequently affected the United States economy, causing a draw back in the economic activity by an approximate of 9.5% of annual Gross Domestic Product (GDP).

Bhuiyan, Sakib, Pakpour, Griffiths, & Mamun (2020) examine the emotional consequences of lockdown to social and economic activities in Bangladesh. The findings reported a number of suicide cases which were as a result of lockdown, and thereby causing starvation, increase in poverty level, close of business, loss of job, and thus no or less consideration or intervention was provided by the relevant authorities. Lea (2020) analyzes the economic position of the UK in consideration of the coronavirus crisis; and revealed that the GDP fell by 2% in the first quarter of 2020 (Quarter-On-Quarter). Although, tagged as the largest quarterly decline in the UK economy since the 2008 global financial crisis. Oum & Wang (2020) examines the relationship between lockdown and social activity restriction policies for COVID-19; result affirms that there is rise in external cost of infection risks as individuals do not consider the burden they impose on others and relevant healthcare system when deciding on their social activity and mobility. Gupta, Bhatt, Roy, & Chauhan (2020) analyzed the role of human activity on forest fire incidences in the Western Himalaya, India. The study findings revealed that human activities play a major role in forest fire incidences and thereby inflicting additional cost on the side of the authorities. Though, the human social restrictions provided an opportunity for the sustenance of the economy in the region.

Conceptual Framework

The below conceptual framework describes the context of economic shock caused by the novel coronavirus. In that, the human societies are faced with a number of socioeconomic challenges which requires vibrant health, economic, social as well as political concerns (Geda, 2020). Saurabh, Trivedi, Lokesh, & Gaikwad (2020) employed a pandemic centric approach to COVID-19 lockdown, and confirmed that the lockdown directly clout the social and economic positions of individuals and keeping many below the poverty line in their attempt to analyze the relationship between number of infections and economic operations under partial lockdown in India.
As seen from the above diagram, the process starts with the emergence of the disease and the subsequent responses made by policy makers in an attempt to combat the continuous spread of the deadly virus (Buheji & Ahmed, 2020; Kim, 2020; Qi et al., 2020). Consequently, part of the measures taken to mitigate and control the increase in number of death and its continuous spread was the imposition of Stay-At-Home measure by the relevant authorities as indicated in the studies of Amat et al., (2020); Julius et al., (2020); Hasanat et al., (2020); Dev & Sengupta (2020); Bairoliya & Imrohoroglu (2020); Buheji & Ahmed (2020). The lockdown response thereby contributed towards underpinning raise in economic shock and consequently translated into increase in the poverty level of many families as well as drastic fall in the country’s GDP (Bairoliya & Imrohoroglu, 2020). In addition to retrenchment of workers and rendering many unemployed, collapse of educational system as well as denying many vulnerable households to essential needs (Vahidi & Jalili, 2020).

This research is designed to assess the hypotheses that lockdown measure to COVID-19 causes economic hardships in Nigeria by considering the questions framed below:

1) Does lockdown response measure during COVID-19 periods affects economic activities in Nigeria?
2) Does government intervention during lockdown periods influence economic activities in Nigeria?
3) What is the influence of government measures to revive and maintain the economic activities in Nigeria?

3. Research Method

This study adopts a quantitative research approach which entails systematic evaluation of individuals’ behavior towards an unprecedented economic shock and their response to the manner in which the situation might unfolds by lifting the lockdown measure in Nigeria. The field study was manually conducted by using a well-structured survey questionnaire to analyze individuals, households, and business owners on the nature and circumstances of the COVID-19 pandemic and the economic effects of lockdown measures imposed by the government. Age and gender, class and source of income, location, educational background, as well as knowledge of COVID-
19 were among the influencing factors observed during the study. The observation data was collected during May-July 2020 from four states representing each region in Nigeria. Primary data was sourced from the distribution of well-structured questionnaire on random sampling of 100 respondents. Chi-Square Test of Independence was used to analyze the level of dependency/connectivity of the economy (households and other activities) and the lockdown with the help of the Statistical Package for Social Sciences (SPSS). In essence, the Chi-Square test was employed to check whether all the four regions experienced the economic hardship relating to job loss, increase in poverty level, fallen GDP, economic drawbacks (business activities) and the extent to which the government intervened.

| Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------|---------|---------------|--------------------|
| Yes       | 93      | 93.0          | 93.0               |
| No        | 7       | 7.0           | 100.0              |
| Total     | 100     | 100.0         | 100.0              |

Source: Field Survey (2020).

Table 1 is a frequency distribution which shows the cumulative percentage of all variables as calculated with respect to their sample. The findings revealed that 93 percent of the total sample participated in the study as the whole variables were measured by the selected indicators which established the basis for the phenomenon (see table 3).

| Value                        | Df | Asymp. Sig. (2-sided) |
|-----------------------------|----|----------------------|
| Pearson Chi-Square          | 7.310a | .120 |
| Likelihood Ratio            | 9.721 | .045 |
| Linear-by-Linear Association| 5.473 | .019 |
| N of Valid Cases            | 100 |

Source: Field Survey (2020).

From table 2 above, economic activities (relating to trading, producing and distribution of goods and services) were proved not to be disturbed by the presence of lockdown as calculated revealed 12% dependency level.

| Value                        | Df | Asymp. Sig. (2-sided) |
|-----------------------------|----|----------------------|
| Job Loss Pearson Chi-Square | 4.421a | .219 |
| Likelihood Ratio            | 6.775 | .079 |
| Linear-by-Linear Association| 3.249 | .071 |
| N of Valid Cases            | 100 |
| Increasing Pearson Chi-Square| 10.311a | .036 |
| Likelihood Ratio            | 11.218 | .024 |
| Linear-by-Linear Association| .805  | .370 |
| N of Valid Cases            | 100 |

Source: Field Survey (2020).
Table 3 revealed the outcomes from the three key indicators of economic hardship (job loss, increasing poverty level, falling GDP) as considered in the study. The result indicated 0.219, 0.036, and 0.729 for job loss, increasing poverty level, and fallen GDP level respectively. However, this means that the lockdown response major has no or less significance on the economic positions. Even though many claimed to have been affected by the lockdown measure as shown in table 1, our findings revealed a contrary result.

|                          | Value | Df | Asymp. Sig. (2-sided) |
|--------------------------|-------|----|-----------------------|
| Pearson Chi-Square       | 5.185 | 4  | .269                  |
| Likelihood Ratio         | 7.494 | 4  | .112                  |
| Linear-by-Linear Association | 1.319 | 1  | .251                  |
| N of Valid Cases         |       | 100|                       |

Source: Field Survey (2020).

The influence of government efforts to intervene during the periods of lockdown is shown in table 4 above. The result indicating 0.269 probability level means, we accept the hypothesis that government is doing well to combat the challenges and/or hardships that may arise during the lockdown periods.

4. Results and Discussions
Based on the analysis above on economic implications of lockdown during the periods of COVID-19 articulated by different class of individuals, four regions in Nigeria (Northwest, North-Central, South-South and Southeast) were considered. The questionnaires were randomly distributed among four sample groups with a 95%, 93%, 92% and 91% response rates respectively. Most respondents were male between the ages of 26 to 45 years, mostly low income earners who considered trading as their major source of income, and thus having dependents of more than five persons. Despite the educational background of the sampled respondents (which indicated 30% within primary and secondary school level and 60% at the post-secondary school level) their understanding level of COVID-19 pandemic especially in terms of its existence requires further sensitization. Thus, the result indicated 37% of the respondents to believe in the existence of the virus and 53% were of the view that it does not exist. All these regions experienced the imposition of lockdown measure by their respective state authorities. A Chi-Square Test of independence revealed that the major socio-economic challenges including job loss, increase social vices, rise in poverty level, fall in economic activities, as well as fall in the level of GDP as claimed was not as a result of the lockdown response measure to COVID-19 imposed in most of the regions. Thus, it is evident from the study that lifting of lockdown would be the best action for the government to take to mitigate the economic challenges claimed to be associated with COVID-19 measures.

5. Conclusion and Recommendations
The continuous spread of this deadly virus and the reduction of death associated with it is the primary task of the concerned authorities. The study considered the effect of lockdown response to corona virus as well as its economic implications on health condition, economic, political, educational, as well as social position of Nigeria. Questionnaires were distributed to the groups with a 95%, 93%, 92% and 91% response respectively. Most respondents were male who range between the ages of 26 to 45 years. A Chi-Square Test of independence shows that the lockdown measure on COVID-19 was not the cause of major socio-economic challenges (job loss and rise in poverty level, declined in economic activities, as well as fall in GDP) as claimed by the
respondents. Further to this, government should decide on effective measures needed to contain the continuous spread of the virus especially through development of research based and healthcare institutions.

The study revealed that lifting of lockdown would be the best alternative for the government toward uplifting socio-economic activities. But the use of other COVID-19 preventive measures like face mask, social distancing and regular wash of hands among others should be imposed on individuals and groups. More so, individuals’ political trust and democratic preferences, as well as trust on health professionals or experts should be established. Knowledge based institutions and increase funding and opportunities for research and innovative development should be provided. Consequently, post COVID-19 to revive dilapidated vocational centers and establish more economic and entrepreneurship development centers for skill acquisitions and capacity building should be considered. Equally, to provide the needed conducive environment for ease of doing business, effective laws and regulations should be put in place to help initiate, exploit, innovate, develop and in turn harness opportunities. On the challenge of inadequate finance, the study recommends those potential entrepreneurs and most philanthropies to patronize the available non interest financial institutions such as JAIZ BANK, TAJ BANK and others for economic recovery.

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