

IMPACT OF COVID-19 PANDEMIC ON AGRICULTURE, FOOD SECURITY AND LIVELIHOOD SUSTAINABILITY IN NIGERIA

OLANIYAN, Samuel Taiwo

*Agricultural Education Department,
Oyo State College of Education, Lanlate
08026550777*

AKINDELE, Wasiu Olaide

*Agricultural Education Department,
Oyo State College of Education, Lanlate
08139605845*

Abstract

The outbreak of novel corona virus (COVID-19) in Wuhan, China in December, 2019 is a big blow to the entire globe. The fact that it has no definite treatment or vaccine makes it a global health crisis. Nigerian government, in an attempt to curtail the spread, locked down the economy through various policies such as social/physical distancing ban on interstate travels, avoiding crowds, closure of hotels, and religious gatherings and other protective practices. In view of that, this study evaluates the impact of COVID-19 on agriculture, food security and livelihood sustainability in Nigeria. This study adopted a method based on scenarios and make use of rapid response survey to elicit additional information. This is because it is difficult to quantify the real impact as a result of uncertainty and rapid evolving nature of the pandemic. The finding clearly revealed that agriculture, food security and livelihood were adversely affected. The study concludes to recommend provision of loans to various agribusinesses with generous interest rate and payback period, collaboration by the government to maintain international trade and the need for international monetary agencies to provide debt-relief services for Nigeria's economy.

Keywords: Agriculture, COVID-19, food, livelihood, lockdown, sustainability

Introduction

On the 31st December, 2019 in Wuhan town, Hubei province, China, a deadly virus emerged (Guo, Henry, Cao and Hong, 2020). The virus spreads like a wild fire to other parts of the world unprecedentedly causing serious panic and sudden death across the globe. Messay (2020) cited Johns Hopkins University (JHU) report, on 29 April, 2020, there are more than 3.1 million confirmed cases of COVID-19 in 210 countries/territories and more than 218,000 thousand consequent deaths. Covid-19 continues to have adverse effects on global agriculture, food security and livelihood in all the countries of the world. COVID-19, a novel corona virus 2 (SARS-COV-2), previously known as 2019-nCoV, was recognized as the

main causative virus in China and then was identified later in different countries around the world (World Health Organization, WHO 2020). SAR-COV-2 is highly contagious and infectious from person to person, and one infected person can infect on average six persons (Yan et al, 2020). WHO (2020) reported on the 8th of May, 2020 that there were about, 4.01 million confirmed cases and 276,216 deaths worldwide. This translates into 6.9 percent deaths of the total confirmed cases. On the other hand, the number of recovered cases on the date stated above was 1385184 cases, representing about 34.5% of the total positive confirmed cases. National Communication for Disease Control (2020) stated that COVID-19 spreads through coughing/sneezing and touching of the virus-

infected surfaces makes it more dangerous for the people than other previously known pandemics. Seleiman (2020) submitted that SAR-COV-2 can overcome the healthcare system of well-resourced countries due to none-existence of specific vaccines for treatment or prevention. The only interferences for now are social distancing, tracing contact and quarantine as at May, 2020.

In Nigeria, Federal Ministry of Health (2020) announced her first case (index case) of COVID-19 on 27th February 2020 to have come from an Italian doing a business with Ogun State in Nigeria. The virus had since been spreading unabatedly all over the nooks and crannies of the country. As at 3rd May, 2020, Nigeria had recorded 1107 cases with the highest confirmed cases in Lagos, followed by Kano State and Federal Capital City (National Communication for Disease Control, 2020). The pandemic situation in Nigeria is quite precarious in that it reveals the readiness of Nigerian government to handle emergencies. No wonder, Anne (2010) stressed that “epidemic reveals the truth about the societies they hit”. Nigeria is undoubtedly characterized by under-resourced medical system, subsistence economy, chronic unemployment, food insecurity, Boko Haram insurgency in North Eastern part of the country and unimaginable poor livelihood, to mention but few. Many fear that the socio-economic and cultural scenarios in Nigeria may exacerbate the prevalence of COVID-19 in the country though the government is trying its level best to manage the situations through establishment of a presidential task force with daily updates, making available a state of emergency phone members, and introduction of testing centres across regions. The task force insisted on maintaining social distancing, restriction of travels and public gatherings including worship centres, establishment of palliative measures to the poorest of the poor, imposing a quarantine policy and compulsory wearing of face mask in public places. Government initially introduced lockdown to stop the spread of the pandemic but later replace it with ban on interstate travels but this was “flexed down” due to fragile economic situations, level of

hunger and inability of the government to make provision for all citizens.

However, the virus has drastically affected all sectors of the Nigerian economy. In view of this, this study raised a question on whether COVID-19 has any significant impact on agriculture, food security and livelihood of Nigerians. Sequel to the aforementioned, this study is categorized as follows:

1. Conceptual issues on Nigerian agriculture, food security and livelihood.
2. Material and methods adopted in the study.
3. Result and discussion based on observation and contextual analysis
4. Conclusion
5. Policy recommendations.

Conceptual Clarification

It is essential to provide some insight about certain basic concepts that attract the attention of current literature and remains prominent to the COVID-19 pandemic in Nigeria especially as it relates to Nigerian agriculture, food security and livelihood sustainability. These concepts laid the foundation for systematic comprehension of ideas enclosed in this study.

Nigerian Agriculture

Agriculture in Nigeria is characteristics with a vicious cycle of low output, low income, low saving and investments resulting again in low output (Iganga and Asemota, 2008; Olaniyan, 2013). Areo, Igbokwa, Asadu and Bawa (2010) submitted that agriculture is a source of food, employs large pool of rural households, means of saving wealth, source of cash income and bestows high status on farmers. Olaoye (2014), Owoade and Olarinwa (2018) and Are, Igbokwe, Ajada & Bawa (2010) agreed that some of the constraints to sustainable agricultural development in Nigeria include preponderance of small holder rural farmers and generational gap within the sector, corruption, misappropriation of funds, policy summersault, poor level of collaboration between research and educational institutions, poor production and poor infrastructures as well as poor extension services. Freeman and Jeremiah (2011)

observed that Nigeria needs a rethink over the current modes of agricultural practices which limits production, purely to the amount of arable land available and engage technology to boost food production and ensure food security for the populace.

Food Security

Food security is a flexible concept as food has many definitions in research and policy usage; the definitions may be explicit or implied. Due to the complexities of the technical and policy issues involved in the phenomenon of food security, considerable reconstruction of official thinking on issue of food security have continued to reshape its understanding as a problem of international and national concern (Freeman and Jeremiah, 2011). Idris (2011) in Olaniyan (2013) estimated that 65 percent of Nigerians are food insecure, meaning the majority lack access to the amount and variety of food for a healthy and productive life. Abba-Ruma (2009) and Agbaegbu (2009) remarked that over 90 million Nigerians are in the state of vulnerability of different kinds of food and are faced with a kind of food insecurity known as "household food insecurity". Freeman and Jeremiah (2011) submitted that food supply in Nigeria is very unstable, as post-harvest losses put at between 15-40% percent tampers with food supply chain, giving rise to loss of seventy percent (70%) of perishable food that are scarce off season and thirty percent (30%) of durable foods. Ohakim (2008) and Agbaegbu (2009) agreed that economic status of people is low, making 70.8% to live below poverty line. Food insecurity is a palpable phenomenon in the lives of many Nigerians, and could cause setback for the strategic development of the nation as there can never be national security without food security.

Livelihood

Orwonye, Miftahu and Ahmed (2020) defined livelihood as the capabilities, assets (store, resources, claims and access) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities

for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term. The Institute for Development Studies IDS (cited in Krentz, 2001) proposed that "a livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living". This means livelihood is only sustainable when it has ability to cope with and recover from stress and shock, maintain or enhance its capabilities and assets while not undermining the natural resource base. The disparity between the two definitions is that the latter emphasizes reality while the former attaches importance to contribution of net benefits to other people's livelihood.

Seleiman, Selim, Alaharbi, Alhammad and Juliati (2020) opined that sustainability of livelihood is used to show the ability to undergo external shocks or stresses (similar to COVID-19) and recover from such traumas either maintaining or improving one's livelihood, common adaptations of a sustainable livelihood framework is based on dynamic, human-centred programs targeted at reducing poverty. The concept of livelihood employed in this study is aimed at examining the activities of farmers in Nigeria who are conceived as poor, with low income, poor access to healthcare, mostly illiterate, lacked social services and highly vulnerable to sudden shock such as the outbreak and spread of the novel virus COVID-19 pandemic (Oruonye, 2020). This pandemic will adversely affect Nigeria agriculture and the ability of farmers and rural dwellers to cope with and recover from the stresses and shocks of the pandemic and maintain or enhance their capabilities and assets both now and in the aftermath of the pandemic.

Methodology

This study employed a conceptual approach and observations to establish findings on the impact of COVID-19 pandemic on Nigerian agriculture, food security and livelihood sustainability. This becomes expedient due to the difficulties in qualifying the real impact of the pandemic as posed by high uncertainty, volatile trend and rapidly evolving nature of the scenario. This study adopted a method

based on scenarios, to evaluate the potential impact of the COVID-19 pandemic on agriculture, food security and livelihood sustainability in Nigeria. The study also used rapid response survey to elicit additional information. Secondary materials obtained through web-based generic search engines were also used. The information generated was analyzed using content analysis. The study focuses on understanding the potential impact of pandemic on agriculture, food security and livelihood sustainability in Nigeria during and after the COVID-19 pandemic in order to propose policy recommendation to respond to the crisis.

Result of the Findings

Due to the methodology adopted for this study, results are based on scenarios and other matters arising from the daily impact of COVID-19 pandemic whereby numerous vital sectors of the economy are affected thereby prompting the need for critical evaluation and assessment.

The impact of COVID-19 on agriculture in Nigeria

Agriculture is the main stay of Nigerian economy. The majority of the farmers in Nigeria operate on subsistence level, few of them operate commercial farming. This means that, they are very poor, mostly illiterate, lack access to finance due to no collateral security and operate with little running capital. Meuwissen et al (2019) in Seleiman et al (2020) reported that farming systems face a wide range of economic, environmental and institutional challenges. COVID-19 has adversely affected crop production both in quantities and qualities, critical factors of crop production such as soil fertility, availability of fertilizer, sowing and harvest dates, water availability and pests or disease infestation are seriously affected. Crop production is influenced by availability of agricultural machinery, labourers and international fertilizer and pesticides trade and any delay or absence of these factors could lead to delay in harvesting. Seleiman et al (2020) observed that delaying the harvest process of forages can reduce the digestibility and crude proteins content. It is obvious that COVID-19 has brought about labour shortage

due to ban on interstate movement and lockdown thereby adversely affecting agricultural management practices such as sowing, fertilizer application, irrigation, weed control and harvesting dates. Siche (2020) proffered digital agricultural technologies and related tools as a viable alternative to labour constraints as well as minimum human contact during the pandemic of COVID-19. Basso and Antle (2020) submitted that using a set of digital and geospatial information technologies is the best hope to meet the challenge of sustainable agricultural productivity through monitoring evaluating and managing soil, climatic and genetic resources. The fact that COVID-19 outbreak started in China disrupted production and movement of fertilizers and other agricultural inputs. China is one of the most important producer and consumer for phosphate, sulphur and sulphuric acid (Marlow, 2020).

In Nigeria, holistic restrictions, curfew and total lockdown due to COVID-19 has brought about disruptions of some agricultural market chains, restrict access to animal feeds and diminish capacity of slaughter houses, livestock farmers suffered because animals are to be fed daily and the production cycle is short for animals such as daily cows, layer birds, few weeks for broilers and three month for pigs. Centre for the Study of Economics of Africa (2020) forecasted that there will be reduction of consumption of animal protein due to COVID-19. Closure of markets, club houses, restaurants, logistic restriction on tourism will adversely affect demand for and consumption of agricultural produce such as fish, meat, egg, vegetable and snails etc.

Feed additives and other veterinary medications that are imported into the country are out of the reach of the farmers due to the pandemic, thereby leading to increase in the cost of poultry and eggs. Furthermore, livestock companies may face an increasing cost of feeds and medication triggered by the COVID-19 pandemic (IPC, 2020a; 2020b). The implications of COVID-19 on fish farming can be quite complex. Concerning wild-capture fisheries and aquaculture, the inability of fishing vessels to work, due to collapse of market, limited

workforce, border closures, as well as sanitary measures, can create a domino effect on the supply of fish products and cause significant market changes, disturbing prices. COVID-19 pandemic will adversely affect agriculture in terms of crop production, food and animal production.

The Impact of COVID-19 on Food Security

The COVID-19 pandemic is already affecting global food systems, supply chains, and purchasing practices. Messay (2020) painted a picture of food security even before COVID-19 hit the world. He remarked that 113 million people on the planet were already struggling with severe acute food insecurity due to pre-existing shocks/crises of different types such as extreme weather conditions, conflicts, displacements, natural calamities, environmental degradation and reluctance of some government to enhance the agricultural sector and people's livelihood. This means that people were already at the extreme end of the hunger spectrum weak, and less-equipped to fend off the virus. Stockpiling of food occasioned by the pronouncement of the government created a strain on food supply chain while restrictions on trade and movement have had a knock-on effect on availability of food stuffs. Price of food stuffs escalated astronomically inhibiting equitable access to quality nutritious food. It is feared that if the rate of infection and widespread fear of infection, coupled with restrictive social distancing measures lingers, there may be severe food insecurity and higher rates of malnutrition in the long term. COVID-19 is definitely placing more stress on poor families because food price rises and has resulted into their inability to access and afford nutritious food. Moreover, spiking food prices could potentially lead to social unrest and instability. The food insecurity impact of COVID-19 may go beyond the pandemic period if the poor and riskier people are not supported at least to access food.

Impact of COVID-19 on Livelihood

The COVID-19 pandemic has fought the global economy to a standstill, thereby making it become very fragile. Oruonye et al (2020) opined that the fear of fragility of the global economy could increase global

unemployment by almost 25million. They backed up their position with International Labour Organisation (ILO, 2020), that estimated 25 million people could be laid off across the globe with loss of workers' income of as much as USD 3.5 trillion (ILO, 2020). The impact is expected to be wholesome on Nigeria because over 80% of working population are employed in the informal sector (Centre for the Study of Economics of Africa, 2020). The Nigeria's economy is largely dominated by the informal sectors that are very extroverted and vulnerable to external shocks. Many Nigerians such as taxi drivers, waste recyclers, tradesman, construction workers, artisans, food vendors, hairdressers, street trader/vendors, micro and small scale manufacturing firms, repair and service provision outfits lost their source of income. They have only two worst options to go out for their daily substance amid the virus or to die of hunger at home. Thus, they are vulnerable to the negative economic impact of COVID-19 pandemic. This is because their income-generating activities are more closely tied to the daily whims of the market. CSEA (2020) remarked that negative impact of the pandemic will constrain the ability of the people to meet their immediate basic needs such as access to food, shelter and health services, predicated on daily access to face-to-face interactions and customer flow.

According to National Bureau of Statistics (NBS) estimated that the Nigeria's unemployment rate rose from 18.1% in 2017 to 23.1% by the end of September, 2018. The official unemployment rate currently is round 26%, it is obvious that with current trend of COVID-19, unemployment may escalate to over 60%. The pandemic poses a threat to the livelihood of about 50% of the 99.6 million Nigerian adult population who earn their income on daily or weekly basis (Bailey, 2020).

Oruonye et al (2020) cited Enhancing Financial Innovation and Access (EFIA) which reveals that 32% of Nigeria's adult population earns its income daily, 17.5% earn weekly, 18.5% earn their income occasionally and 5.5% earn their income annually, whereas 8.0% do not earn any income. This means more Nigerians are vulnerable to

unimaginable livelihood due to lockdown as a result of COVID-19 pandemic.

Inflation skyrocketed due to the drop-in impacts and shortage of basic consumer goods imported from China. Nigerian traders are seriously affected because most of them earn their livelihood by trading in Chinese product such as textiles, electronic and household goods. Most businesses shut down, cut working hours, laid off their staff and others sent their staff on indefinite compulsory leave without pay. Millions of children are losing out on essential nutrition with schools closed. Many families cannot afford to feed their children as they have lost their jobs and eventually their source of livelihood. The effort of the government to feed the children at home is only on the pages of newspapers. The palliative of the government to the poorest of the poor is over-politicised or distributed to party faithful.

Conclusion

This study has examined the impact of COVID-19 on the agriculture, food security and livelihood sustainability in Nigeria using a conceptual analysis. The finding of the study reveals that the outbreak of COVID-19 pandemic has grave detrimental effect on all sectors of the economy including agricultures which is the mainstay of Nigerian economy. The lockdown imposed to curtail the spread of the disease adversely affected agriculture in terms of crop production, food and animal production through disruptions of some agricultural market chains, restricted access to animal feeds and veterinary services. Food insecurity became worsened because prices of foods stuffs escalated astronomically inhibiting equitable access to quality nutritious food COVID-19 also fought the livelihood sustainability of most Nigeria in the informal sector to a pitiable stage because income-generating activities of many of them are closely tied to daily whims of the market.

The covid-19 pandemic is definitely a global emergency and has continued to spread across the globe with no definite treatment or vaccine, but requires an extraordinary set to policy responses. The already fragile Nigerian economy is being shut down for public health reasons related

to COVID-19 and none of the existing economic programme is adequate to cushion the adverse effects on livelihood. The study reveals that many agricultural businesses have been affected by the social distancing and lockdown measures.

Recommendation

Based on the findings of the study, the following are suggested:

- (i) As a matter of policy suggestion, government should provide massive loans to various agricultural businesses with generous interest rate and payback period.
- (ii) Government should collaborate to maintain the international trade in terms of fertilizers, pesticides, grains and other agri-food export and imports.
- (iii) The expected adverse impact of COVID-19 on food security can be minimized through enhancing local productions and short food supply chain.
- (iv) There is need for international monetary agencies to provide debt-relief services for Nigeria's economy with parallel treatment in relations to private and commercial debt which account for a significant share of the country's external debt.

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