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Covid 19: Ramifications for progress towards the sustainable development goals (SDGs) in Nigeria

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ABSTRACT

This paper examines whether the impact of COVID-19 at the household level is an obstacle to achieving the sustainable development goals of no poverty (SDG1), zero hunger (SDG2), good health and wellbeing (SDG3) and decent work and economic growth (SDG8). We limit our investigation to farm households given their precarious situation. We analyse data from the World Bank National Longitudinal Phone Survey (COVID-19 NLPS) and the 2018/2019 General Household Survey (GHS). An exact McNemar's test determined that there was a statistically significant difference in the proportion of households that skipped a meal ($p = .002$), ran out of food ($p = .036$) or went a whole day without food ($p < .001$) pre- and during- COVID-19. Approximately 81% perceived COVID-19 as a substantial threat to their income. This was buttressed by the finding that 75% reported a decrease in their total income since the outbreak of COVID-19. Overall, the findings in this paper suggest that COVID-19 posed a substantial threat to the attainment of SDGs 1, 2, 3 and 8. In the long term, government would need to mitigate the impact of COVID-19 through targeted social protection programs and policies to ensure that the country is on track to achieve the SDGs.

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1. Introduction

Sub-Saharan Africa has one of the highest proportion of households living on less than 1.25 USD a day (United Nations, 2015). The UN Millennium Development Goals Report (2015) estimated the percentage of Sub-Saharan Africans that lives in extreme poverty at 41% of the population in 2015. Despite recent efforts to reverse the trend, the region continues to lag behind other regions of the world. Nigeria is the second of five countries that constitute 60% of the world's 1 billion extremely poor people (World Bank 2015). In Nigeria, small farmers make up 88% of the farming population, with over 72% of these smallholders living below the poverty line (FAO 2018). This implies that despite the crucial role small farmers play in feeding the country, many are still unable to break out of poverty or to attain food security. In addition to hunger and poverty, Nigerian farmers face a myriad of challenges ranging from climate change to post-harvest losses, land

ownership to limited access to technology (Apata et al. 2018; Mgbenka, Mbah, and Ezeano 2016). There is evidence that the outbreak of COVID-19 is adding to these challenges.

From previous experience – for example, with 2014–16 Ebola outbreak in Africa – the regions that experience the most adverse effects are those where a substantial number are living close to the poverty line (Fallah et al. 2015; Kapiriri and Ross 2020).

Driven by the sustainable development goals (SDGs), the pathway taken by the Nigerian government to achieve the goals of ending hunger, poverty and unemployment had been on course before the outbreak of COVID-19. Thus, in this paper, we examine the effect of COVID-19 on households, and the obstacle COVID-19 poses to achieving the SDGs. We focus on SDG1 (no poverty), SDG2 (zero hunger), SDG3 (good health and wellbeing) and SDG8 (decent work and economic growth). Actions to attain these goals have taken centre stage in the government's current and future development plans.¹

The paper is organized as follows. Section 2 discusses COVID-19 as a threat at the household level, and obstacles to progress towards the SDGs. Data and estimation methods are described in Section 3. The results and discussion are presented in Section 4. Section 5 concludes.

2. COVID-19 as a threat to progress towards the SDGs in Nigeria

On 30 January 2020, the Director-General of the World Health Organisation (WHO) declared the novel coronavirus outbreak (2019-nCoV) a Public Health Emergency of International Concern (PHEIC). The Nigerian government on 31 January, through the Nigeria Centre for Disease Control, established a Coronavirus Preparedness Group tasked with monitoring and reviewing the outbreak globally, evaluating the risk of spread, and improving the country's position ahead of an outbreak. These steps coincided with the categorisation of Nigeria among the high-risk countries in Africa by the WHO (Ezigbo and Ifijeh 2020). Nigeria confirmed the first case of the coronavirus in sub-Saharan Africa on 27 February. In March 2020 the Nigerian government declared a lockdown in the Federal Capital Territory, Lagos and Ogun states. All states eventually imposed lockdown. The lockdowns restricted group gatherings, travelling and all activities categorised as nonessential. These restrictions negatively impacted the economy, including agricultural production – processing as well as the supply chain (Penrhys-Evans 2020). There were large income losses across agricultural-related jobs (Abdul 2020).

Following the conclusion of the Millennium Development Goals (MDGs), the Sustainable Development Goals were a global call to action for people, planet and prosperity, aiming to enhance economic, social and environmental dimensions of social development. The 2030 Agenda for Sustainable Development consists of 17 sustainable goals.

Nigeria was committed to the SDGs since its adoption. Credible progress was made in the domestication process of the SDGs, integrating them into the country's Economic Recovery and Growth Plan, with the development of the home-grown 'Integrated Sustainable Development Goals' to make policy more responsive to the SDGs (Nigeria's Voluntary National Review, 2020). However, Nigeria is ranked 160 out of the 166 countries on the 2020 SDG Index scores (Sachs et al. 2020) implying that much more action still needs to be taken by the Nigerian government as shown in Table 1.

Table 1. Progress of Nigeria on SDGs 1, 2, 3 and 8.

SDG goal	Indicators	2016	2018
1 End poverty in all its forms everywhere	Proportion (overall) of people living on less than \$1.25 a day	62.2	**
	Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and the vulnerable	8.29	↑ 2.37
	People residing in households that have access to basic services (%)		
	• improved sanitation.	35.9	↑ 6.1
2 Zero hunger	• improved water source.	64.1	↑ 2.9
	Children under the ages of five are suffering from acute malnutrition	10.6	↑ 0.8 [†]
3 Ensuring healthy lives and promoting well-being at all ages	Maternal mortality ratio (per 100,000 live births)	576	↓ 64
	Births attended by skilled health personnel (%)	43	*
	Mortality rate for children below 5 years (per 1000 live births)	128	↑ 4
	Women of reproductive age (aged 15–49 years) who have their need for family planning satisfied with modern methods (%)	13.4	**
8 Inclusive and sustainable economic growth, employment and decent work for all	Annual growth rate of real GDP (%)	−1.58	↑ 3.48
	Annual growth rate of real GDP per capita (%)	−28.24	↑ 26.9
	Unemployment rate	14.4	↓ 8.9
	Youth (aged 15–24 years) not in education, employment or training (%)	20.9	**
	Number of children aged 5–17 years engaged in child labour (%)	188	↓ 77

*No significant change, **No record, ↑ increase, ↓ decrease in comparison to baseline (2016), [†] data for 2017

Source: NIGERIA Integration of the SDGs into National Development Planning: A Second Voluntary National Review; Tull (2019).

2.1. COVID-19 as a potential driver of household hunger, poverty, and food insecurity

COVID-19 affected various constituents of household food security in Nigeria. Prior to lockdown, households that could afford to stock up food staples purchased more than usual. This stockpiling in addition to disruptions in food supply chain drove prices up in regions where supply was limited. For instance, the price of a 50 kg bag of rice rose to NGN21000² from NGN18000, and the price of yam rose from NGN500 to NGN1200 (Akinfenwa 2020). Such increases in the price of staple food pushed them beyond the reach of many farm households, increasing food insecurity, particularly for the 26 million undernourished Nigerians.

Income losses associated with COVID-19 also drove poor farmers to seek alternative income-earning activities – involving migration which increased the risk of spreading the virus. For many farmers, there was the conundrum of whether to follow lockdown rules at the risk of losing their livelihoods or continue farming and risk exposure to COVID-19.³

2.2. Impact of COVID-19 on farm households' lives and well-being

Healthy life expectancy in Nigeria is 49 years, thus earning Nigeria a place in the bottom six countries in the world (Soto, Moszoro, and Pico 2020). About one-third of Nigerian smallholder farmers are above 50 years⁴ (Anderson et al. 2017). There are

links in the severity of COVID-19 and age (Zheng et al. 2020; Liu et al. 2020). Thus, a considerable proportion of farmers in Nigeria is at higher risk. More so, the effect of the virus is acute for individuals with underlying health conditions (Chen et al. 2020; Clark et al. 2020).

Figure 1 reflects Nigerians low confidence in the publicly provided primary healthcare (Tilley-Gyado et al. 2016). Many small farmers have to travel 5–9 km to access decent healthcare (Anyiro 2010; Titus, Adebisola, and Adeniji 2015). The lack of basic amenities such as access to clean water for regular hand washing put many rural dwelling farmers at risk. For the millions of farm household that live in rural communities, it is may be unfeasible to social distance, and in the outbreak of the virus to self-isolate.

In addition to COVID –19 posing new-unanticipated health risks, lockdowns have ramifications for SGD3 (especially 3.3)⁵ as an effort towards ending the epidemics such as AIDS, tuberculosis, malaria is either delayed or suspended as the focus shifts to COVID-19. Benjaminsen (2020) reported that activities targeted at malaria prevention have largely been deferred. For instance, there has been delays or complete halt in the distribution of mosquito nets and access to other preventive medicines. In addition, the pandemic could lead farmers with pre-existing illnesses to either stay away from hospitals or become neglected due to the shift in health focus.

There are emerging findings globally on the impact of COVID-19 on mental health. Individuals have reported effects on wellbeing ranging from being worried about the future to feeling stressed and anxious (Smith et al. 2020; Lim et al. 2020; Bhuiyan et al. 2020). To address these health-care concerns, the government budgetary allocation to health in 2020 reached a five-year-high. However, with less than 5% of the total annual budget allocated to expenditure on health, it remains well short of the 15% target set by the African Union governments since 2001 (BudgIT 2020).

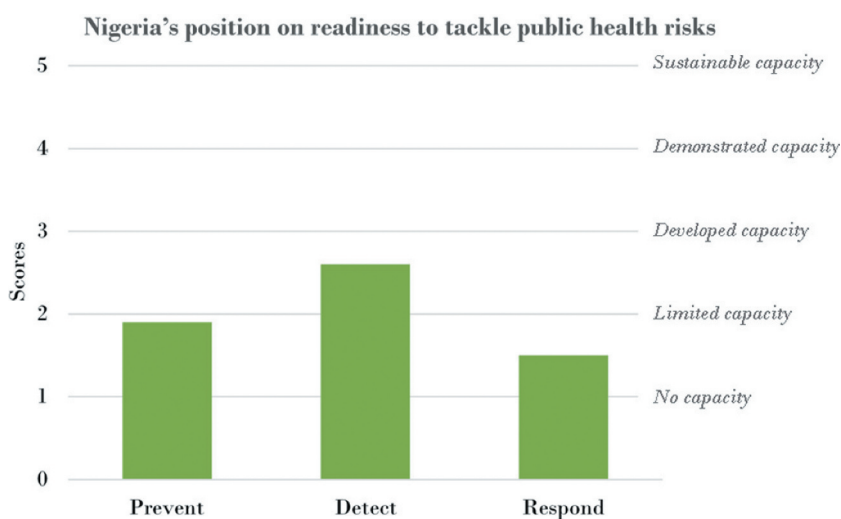


Figure 1. Nigeria's position on readiness to tackle public health risks in 2017 (Adapted from Dixit, Ogundej, and Onwujekwe 2020 using data from World Health Organisation 2017).

2.3. COVID-19 effect on employment and economic growth

By the end of 2020, approximately 39.4 million people will be unemployed in Nigeria (BusinessDay 2020a). For many households that supplement farm income with wages, regular cash flows depend on household members working. However, this additional source of income may be threatened by COVID-19 posing a risk to full and productive employment. Also, agricultural labourers are likely to be directly affected when farmers are unable to work at full capacity.

Nigeria depends on oil revenues that had already fallen with lower prices triggered by a collapse in demand (Olawaju 2020). There is evidence of inflation (see Colato 2020; NBS 2020) attributed partly to the pandemic, with food inflation increasing from 14.98% in March to a two-year high of 15.03% in April (Reuters 2020). The increase in consumer prices rose from 0.84% in March to 1.02% in May 2020 (FocusEconomics 2020). It is anticipated that Nigeria's economy would contract by 3.2%, with a recession that had not been witnessed in the past four decades (Nigeria Development Update (NDU) World Bank, 2020). In an economic downturn, the effects are particularly pronounced among lower-income groups and in rural areas (Tisdell and Sen 2004). The projection is that COVID-19 will drive 5 million more Nigerians into poverty in 2020 (NDU, 2020).

2.4. Government action to off-set the economic effects of COVID-19

The Nigerian government have taken steps to cushion the effect of COVID-19 through a stimulus package of 50 billion nairas (EUR 121 million) targeted to support households and micro and small enterprises (Ozili and Arun 2020). The government also announced three-month interest holidays for beneficiaries of microloans of the Government Enterprise and Development Programme (GEEP). Part of the government (at federal and state levels) effort to cushion the effects of the COVID-19 pandemic was through the distribution of food to support vulnerable households. Approximately 77,000 metric tonnes of food consisting mainly of grains were drawn from the National Food and Strategic Reserve – a source which could be depleted if the effect of the pandemic persists. The government announced a cash transfer of 52 USD (representing 4 months advance payment of the monthly stipend of 13 USD) to poor and vulnerable household National Social Register (NSR). However, those on the register constitute around 12% of the people that live below the poverty line (Dixit, Ogundej, and Onwujekwe 2020). However, there are concerns (see Ajibo, Chukwu, and Okoye 2020; Eranga 2020; BusinessDay 2020b) that these measures are inadequate, and partially excludes the informal sector in which many vulnerable and poor households fall.

3. Methods

We analyse data from the World Bank National Longitudinal Phone Survey (COVID-19 NLPS) consisting of a sample of 1,950 households covering all regions of the country from which we extracted 954 farm households. These households participated in 2018/19 General Household Survey (GHS) approximately a year prior to the outbreak of COVID-19. The GHS data which provided a reliable baseline for comparison are the fourth round of a nationally representative survey made up of a sample of 5,000 households. The COVID-19 NLPS data is collected with the aim of providing close to real-time update on the socio-economic effects of

the pandemic. The data covered aspects of food security, employment, access to basic services, income and coping strategies. We compare aspects of food security before and during the outbreak of COVID-19 and changes in household income and employment. We employ descriptive comparison to the same sample of farm household pre-COVID-19 (in 2019) and during COVID-19 (from March 2020).

4. Results and discussion

4.1. Results

To examine the effect of COVID-19 on food security, we investigate the situation in 2019 prior to the global outbreak of the pandemic. The results show that 31% of the farm household were food secure as they did not have to worry about not having enough food to eat either because of lack of money or other resources. On the other hand, 69% were faced with at least one of the following food insecurity issues arising from the household not having enough money or other resources for food. Affected households were either unable to eat healthy and nutritious/preferred foods, ate only a few kinds of foods, skipped a meal, ate less than they thought they should, household ran out of food, were hungry but did not eat, went without eating for a whole day, restricted consumption in order for children to eat, borrowed food, or relied on help from others outside the household. This highlights the precarious position of farm household even before the outbreak of COVID-19.

Comparing these findings with the period following COVID-19 restrictions in Nigeria, the results show significant effects of COVID-19 on farm household food security. Households where members skipped a meal ran out of food or went a whole day without food increased from 38%, 34% and 12% in the previous year to 74%, 58% and 36% respectively after the outbreak of COVID-19 as presented in [Figure 2](#). An exact McNemar's test determined that there was a statistically significant difference in the proportion of households that skipped a meal ($p = .002$), ran out of food ($p = .036$) or went a whole day without food ($p < .001$) pre – and during – COVID-19.

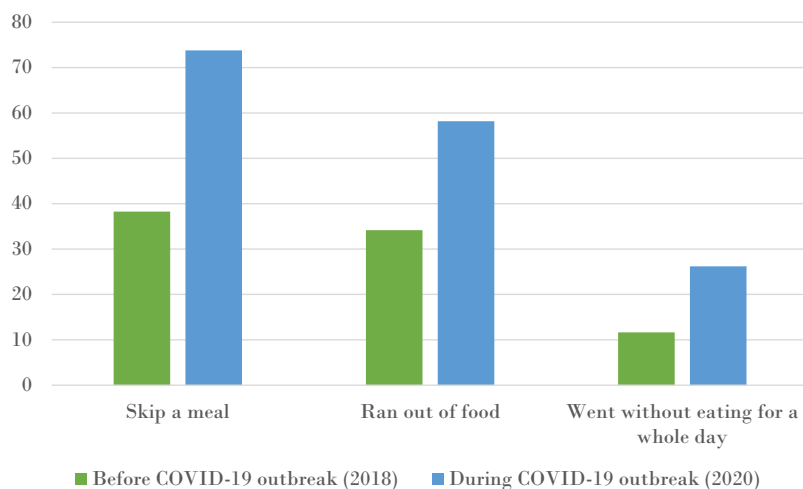


Figure 2. Food insecurity before and during COVID-19.

This finding is in line with the projection of the World Food Program (2020) that COVID-19 will double the number of people facing food crises – with Nigeria contributing significantly to that number, being one of the 10 countries that constituted the worst food crises in 2019. Access to basic food is also affected by COVID-19 restrictions. Due to the pandemic, an average of 21% of the farm households were unable to buy food staples such as rice, beans and processed cassava as shown in Figure 3. At current trends, the household will continue to be at high risk of losing access to food because of shocks associated with COVID-19. With the access to basic food being difficult, the risk of hunger and food insecurity is exacerbated among the half (approximately 51%) of the farm household that are unable to stock up on more food than normal.

The results show that the main reasons reported by farm households for being unable to buy food were lack of money and high food prices – as reported in Figure 4. This is in line with Adeshokan (2020) reporting prices of basic food commodities increasing by up to 50%. This is a major cause for concern as prior to COVID-19 in 2019, at the national level about 56% of The Nigerian households total expenditure was spent on food (according to the consumption expenditure pattern report of the National Bureau of Statistics 2019). This high proportion of total expenditure on food is likely to increase significantly thus resulting in households struggling to meet other basic needs such as housing and children's education. Further, the closure of markets or other travel restrictions being at the bottom of the factors hindering access to food (as presented in Figure 4) is evidence of how COVID-19 intensified financial vulnerabilities of the many households living on less than 1.25 USD a day without savings, credit or insurance.

Since the outbreak of COVID-19, 34% have been unable to perform their normal activities on the farm. This will have a trickle-down effect in terms of unemployment for informal workers that supply farm labour. Crucially, when COVID-19 restrictions coincide with farming activities that require high labour demand – such as planting or harvesting – it would have severe consequence for food supplies at its source.

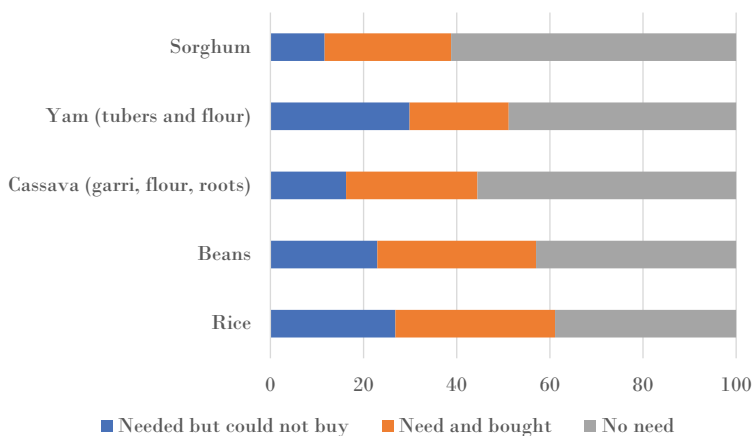


Figure 3. Access to basic food during COVID-19.

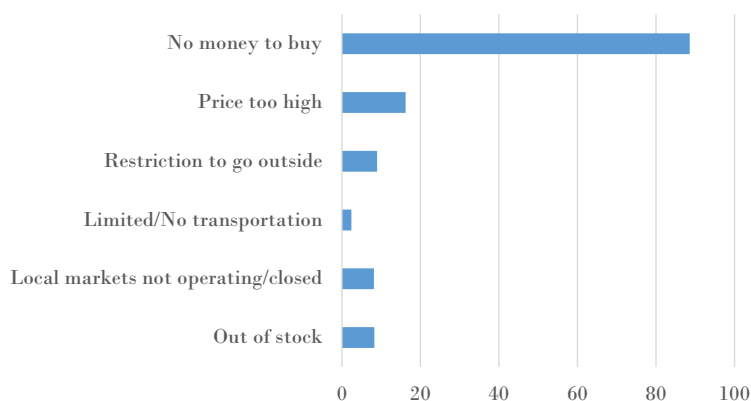


Figure 4. Reasons households are unable to purchase food during COVID-19.

COVID-19 was perceived by 81% of the farm household as a substantial threat to their income; 80% reported a decrease in their total income since the outbreak. Remittances from home and abroad and assistance from outside the household – two important sources of income for many poor farm households – had decreased, as presented in Table 2. This widespread loss in income emanating from both within the country and abroad could be attributed to the simultaneous effect of the pandemic across the country and around the world.

We compared the proportion of farm households that reported a decrease in total income during the pandemic with those whose income stayed the same pre and during the pandemic. We calculated a *z*-statistic of 49.9 which is greater than the critical value, 1.96 associated with a significance level $\alpha = 0.05$. Thus, we conclude that there was a statistically significant difference between the proportions ($p < .000$).

This decrease in income for many farmers coincided with the planting season. As a result of the inability to afford farm inputs, farmers resorted to either reducing the area planted, planting more variety of crops as some sort of insurance or delaying planting altogether.

Households in food crises are likely to have a weakened immune system, thus increasing the risk of developing severe COVID-19 symptoms. Approximately, 75% of the households feel very worried about the possibility of either them or someone in their household

Table 2. Changes in household income by source due to COVID-19.

Income source	N	Increased	Stayed the same	Decreased
Household farming, livestock or fishing	935	8.8	19.5	71.8
Nonfarm family business	633	7.6	9.3	83.1
Wage employment of household members	308	2.9	43.2	53.9
Remittances from abroad	30	0.0	33.3	66.7
Remittances from family within the country	187	2.7	21.9	75.4
Assistance from other nonfamily individuals	211	7.6	12.8	79.6
Income from properties, investments or savings	144	11.1	26.4	62.5
Pension	50	2.0	82.0	16.0
Assistance from the Government	33	18.2	27.3	54.5
Assistance from NGOs/charitable organization	33	18.2	3.0	78.8
Other	8	12.5	25.0	62.5
Total household income	895	4.9	14.5	80.6

Source: Authors compilation with data from 2020 COVID-19 National Longitudinal Phone Survey (COVID-19 NLPS) baseline.

becoming seriously ill from COVID-19. This anxiety could impact on mental wellbeing. The findings in this paper are similar to global findings, e.g. Roy et al. (2020) in India where over two-thirds of respondents reported being worried for themselves and their close ones. In addition, the findings support the postulation by Frissa and Dessalegn (2020) that the poor health-care systems could result in the immense impact of COVID-19 on mental health and wellbeing, especially if mental health services in Sub-Saharan Africa are not improved.

4.2. Discussion

Following the spread of the virus, the primary risks to food security arose from food supply chain disruption and loss of incomes and remittances. There is thus a need for government action regarding the provision of financial and food assistance. In addition, by the government declaring as ‘essential’ all services responsible for food production and supply, the food supply chain could be kept running. However, it is crucial to ensure those involved in the chain comply with necessary safety rules and guidelines. Another way in which COVID-19 affected food security decreases in purchasing power. The sharp and unanticipated rise in food prices increased the cost of households’ typical consumption basket.

The pandemic in the face of corruption also triggered social vices. There were accusations that authorities hoarded food and nonfood items handed to the government by a private-sector coalition against the coronavirus (CA-COVID). This resulted in COVID-19 relief materials in warehouses across one-third of the 36 states being ransacked. Legacies of corruption compromised the pandemic relief measures, denying poor households much-needed support – jeopardizing efforts targeted at the attainment of the SDGs.

5. Conclusion

COVID-19 restrictions disrupted economic activities for farm households, sparking food security concerns. The COVID-19 pandemic laid bare once again the hungry farmer paradox. With few buffers for situations of diminished purchasing power, many farm households are vulnerable to shocks. COVID-19 thus created a substantial threat at the household level and was an obstacle to the attainment of SDGs 1, 2, 3 and 8 in Nigeria.

While COVID-19 will be defeated in due course, recovery plans and actions will determine the impact it will leave behind. Conducting a post-COVID-19 need assessment is an important early step to recovery. Social protection targeting poor households is urgently needed. It is crucial that farm households have access to appropriate support and resources – not only to recover but to build resilience and reduce vulnerability to future shocks.

Notes

1. The government’s Economic Recovery and Growth Plan (2017–20) was designed to sustain economic growth while promoting social inclusion and investing in people. The Nigeria Agenda 2050 plan and the Medium-Term National Development Plan (MTNDP) aims to move 100 million Nigerians out of poverty over the next 10 years.
2. US\$1 is equivalent to NGN 361 (Central Bank of Nigeria rate, June 2020).

3. Nigeria ranks fourth globally in a number of undernourished people, with 13.07% of the population in 2018 undernourished (Worldometers 2020).
4. This age differs from most developing countries and particularly several in Africa where (according to the FAO 2014) the estimated average age of farmers is about 60. However, as 61% of the Nigerian population is under 25 (Central Intelligence Agency 2020), farming can be seen to be unattractive to the young.
5. SDG3 (3.3): By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases, and other communicable diseases.

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Availability of data and material

The data that support the findings of this study are the Nigeria National Bureau of Statistics-General Household Survey, Panel (GHS-Panel) 2018-19 and Nigeria National Bureau of Statistic COVID-19 National Longitudinal Phone Survey (COVID-19 NLPS) 2020, baseline available in [www.microdata.worldbank.org] at [<https://microdata.worldbank.org/index.php/catalog/3712>] and [<https://microdata.worldbank.org/index.php/catalog/3557>].

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