ANNEX A

The Impact of Covid-19 on local food production and informal food markets in Nigeria with Niger Delta region as case study

Research Report

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Address of Host Institution: Centre for Population and Environmental Development (CPED),
54 Akenzua Street,
Off Airport Road,
P.O. Box 10085, Ugbowo Post Office,
Benin City, Nigeria.
Email: enquiries@cped.org.ng,

Tel: +234-8023346647, +234-8080472801

Country of Project Work: Nigeria, West Africa

Names of Members of the Research Team:
Professor Dicta Ogisi, Principal Investigator
Professor Andrew G. Onokerhoraye, Team Leader
Professor May Nwoye
Professor Onovughe Ikelegbe
Engr. Job Eronmhonsele
Dr. Francis Onojeta

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Executive Summary

Background

The covid-19 pandemic has had devastating effects in many countries across the World, affecting every aspect of humanity. Most countries in sub-Saharan Africa met the crises in a weak position. Aside from the heath/mortality effects of the pandemic in Nigeria, the seemingly clearer effect is the impact of the social distancing and lockdown measures on the economy. How people make a living and access markets is impacted by covid-19 across the Niger Delta region. These disruptions are driven primarily by restrictions put in place to curb the spread of the virus. There are emerging signs of the negative impact of covid-19 on nutrition and food security including local food production and the informal economy's food marketing system. This report contributes to a better picture of how covid-19 and measures to contain the virus are impacting livelihoods, especially those of the vulnerable, food security and access to markets in the Niger Delta region of Nigeria.

The **specific objectives** are to:

(i) provide short-term sex and age disaggregated data on the impact of the lockdown on local food production with respect to access to farm inputs, labour supply and farmland and its effects on the food security status;

(ii) provide short-term data on the impact of market closures on the informal urban and rural food markets with respect to the prevention of transactions between producers, traders, wholesalers, retailers and consumers on the one hand and the supply of food, price increases, livelihoods, incomes and food security on the other; and

(iii) outline and disseminate key policy measures to address the identified challenges so as to protect local food production and sustain informal food markets in urban and rural areas during this period of covid-19 and post COVID-19

Government Response to Covid-19 Pandemic

The Nigerian Centre for Disease Control (NCDC) is the government agency in charge of covid-19 preparedness and response activities. A corona-virus Preparedness Group was established at the end of January 2020 by the Nigerian government following the development of the epidemic in China. National NGOs, civil society organisations, international NGOs and UN agencies are also engaged in responding to the pandemic and the effects of covid-19 containment measures. Since mid-March 2020, Federal and State Governments in Nigeria have put in place several measures to prevent, mitigate, and respond to the spread of covid-19 across the country. These include lockdowns, movement restrictions, social and physical distancing measures, as well as public health measures. The distribution of cases is uneven and has resulted in diversified response from the federal government. The degree of implementation and level of compliance from the population varies from State to State. This is related to perception of the government, trust in government directives, and different levels of education and sensitisation to the measures.

Study area

The area for the study is the Niger Delta region of Nigeria using primary data from Delta State, Nigeria. Additional data were collected from other parts of the Niger Delta region for

comparison. Delta State is one of the thirty-six states of Nigeria which is a typical Niger Delta State. The state came into existence on 27 August 1991, when it was created as a separate state from the defunct Bendel State by the then Military Government. Delta State was initially made up of twelve political divisions called Local Government Areas (LGAs), which later subdivided into 19 LGAs in 1996. Presently there are 25 LGAs in Delta State. It has a land area of 16,842 square kilometres and its geographical location is defined as follows:

Longitude 5^{O} 00' and 6^{O} 45' East of the Greenwich Meridian;
Latitude: 5^{O} 00' and 6^{O} 30' North of the Equator.

Delta State is bordered by Edo State to the north, Anambra and Rivers States to the east, Bayelsa State and the Atlantic Ocean to the south, and Ondo State to the west. The shape of the state is less compact, compared with its neighbours, such as Edo, Anambra and Bayelsa; the distance of the eastern boundary to the western boundary being about 165 kilometres, while that of the northern boundary to the southern boundary is about 125 kilometres.

Methodology

The *rapid assessment approach* was used to collect the required data entailing the triangulation of quantitative and qualitative methods. Primary data were collected from 10 randomly selected local government areas including 5 urban and 5 rural areas. Within the selected urban and rural communities a total of 2,000 copies of the sets of questionnaires were administered as follows: (i) 600 Food Producers; (ii) 600 Food Marketers and 800 Households Furthermore, qualitative data collected through key informant interviews and focus group discussions in the 10 local government areas. The survey covered important issues including knowledge and concerns about the pandemic, access to food and other basic needs, employment and income loss, safety nets and coping strategies. The data collected also include the nature and types of lockdown measures imposed by various governments; data on labour availability and various farm input supplies for local food production; data on the frequency of market holdings and the types of food marketed; and data on the impact of lockdown on household livelihoods sources, nutrition and vulnerability.

Socio-economic characteristics of Respondents

The age composition of the respondents was significantly youthful in character as reflected in the age distribution of the respondents in the survey. There is dominance of those within working age (20-59 years) accounting for 80 percent, those below 20 years constitute less than 5 percent, while those aged sixty and over constitute 15 percent.

The sex composition of the respondents shows that, on the average, there were more females than males in the sample of food producers, food marketers and households. The findings show that among the three categories of respondents, women dominate local food production and local food marketing systems. This suggests, therefore, that women would obviously be more impacted by the covid-19 containment measures put in place by federal and state governments in Nigeria.

The proportion of the respondents that are single was less than 15 percent among food producers and food marketers. However, it is about 21 percent among households. The proportion of respondents married was over 60 percent among the three categories of respondents. The proportion of the respondents divorced, separated and widowed were quite small, accounting for less than 20 percent. These patterns reflect the importance attached to marriage in the Niger Delta region.

The findings of the household survey show that the average household size is 6 which show that the household size among the respondents is slightly higher than the average for Nigeria as a whole that is about 5 people. The relatively large household sizes that characterise the sampled food producers, food marketers and households indicate that covid-19 impacts are bound to affect a large number of people within each household.

More than 80 percent of the respondents were literate. They are therefore be able to appreciate the issues involved in their vulnerability to the impacts of covid-19 on their livelihoods.

With respect to occupation, the results of the survey indicate that, on the average, the highest proportions of persons employed were engaged in the farming and trading business. The other activities accounted for between 10 to 20 percent. The employment of the vast proportions of the respondents in agriculture, particularly food farming and food marketing, shows that covid-19 impacts would be significant on their households.

Knowledge and awareness of Covid-19 and of Government containment measures

Respondents in Niger Delta have broad knowledge of the sources of contracting covid-19. About two-thirds of the respondents reported that they are aware that close contact with infected persons is a major ways of contracting covid-19. They also reported that touching contaminated surfaces, and touching of faces (eyes, nose and mouth) are major ways in which covid-19 can be contracted and passed on to other members of their families. This broad knowledge of the mode of contracting covid-19 is significant in the sense that it would make the respondents to respond positively to the pre-cautionary measures put in place by governments to contain the spread of covid-19. The vast majority of respondents knew about measures to prevent the spread of covid-19, although some measures were better known than others.

Knowledge of appropriate social distancing measures was high, with respondents reporting that they knew that staying at home and avoiding going out as well as avoiding crowded places or gatherings could help reduce the risk of contracting covid-19. The respondents' knowledge of the mode of contracting covid-19 is reflected in their practice of social distancing as over 70 percent of them reported that they practice social distancing.

The respondents that failed to keep social distancing during the seven-day period preceding the interviews gave various reasons for failing to do so despite the fact that they were quite aware of the need to do so. These reasons include working in the farm, going to market for food, going to hospital for health care, taking care of dependants, meeting friends and relatives, attending social events, becoming tired of staying indoors, etc.

It was found that over 55 percent of respondents reported knowing about at least seven actions taken by the government to curb the spread of corona virus: the most commonly known were advisory to stay at home, closure of schools, lockdown, curfew, changes of traditional market days and change in location of open markets, limited no of market days allowed and to avoid physical gatherings.

Covid-19 and Local Food Farming

The majority of the food famers (51percent) were mainly involved in arable food production while over 20 percent were involved in fishery/aquatic production with about 16 percent of

them being engaged in animal production. Women dominate local food production as they constitute about 59 percent while men account for 41 percent. Women are also more involved in the production of other food items except fishery activities in which there were more men than women. The implication of this pattern is that women are more negatively affected than men by the impacts of covid-19 in terms of food production activities thereby making them more vulnerable than men. This is confirmed by the fact that women were more negatively affected by their inability to go to their farms during the period March to July 2020 as over 71 percent of them were not able to go to their farmland for farming activities during the period due to lockdowns.

A large proportion of local food farmers still depend on hired labour to supplement family labour supply. Consequently, government restrictions on travel and movement had some effects on farm labour shortages. This in turn significantly disrupted the harvesting and processing of food, and thus impacting the supply chain. It was found that over 86 percent of the food farmers reported that covid-19 has affected their ability to hire the required labour for their farms as 58.67 percent of the farmers did not hire labour for their farms since March, 2020.

A greater proportion of the farmers who were not able to employ paid labour were women as 40 percent of the 68 percent of the farmers who were not able to hire labour were women. This disruption was also exacerbated as women are often not only the primary crop producers, but are also the main care givers to elderly, the sick and caring for children who due to lockdowns were out of school.

Just as the availability and use of hired labour by food farmers was negatively affected by covid-19 so was the availability and use of other inputs. It was found that about 60 percent of the farmers were able to visit agro-dealers or markets while less than 40 percent pointed out that they were not able to do so with more women not able to visit markets to purchase inputs compared with men. Considering the major role which women play in food production, the lack of access to agricultural inputs had negative effects on food production during the covid-19 period.

Majority (64.80 percent) of the respondents pointed out that lack of funds was the major factor responsible for non-purchase of farm inputs because there were increases in input prices due to COVID-19 lockdown and higher transportation cost to access the few markets that had input supplies. Women food farmers were again most affected by the price of the inputs as over 45 percent of them were affected compared with just 23.73 percent of the men. With local food supply chains disrupted, many would naturally rely on imports but the Federal Government closed the borders to trade and travel. This has prevented farmers from being able to distribute their raw or processed foods both nationally and internationally, making it harder for farmers to support their operations. The dramatic rise in the cost of farm inputs during the covid-19 period had some negative effects on the quantity of farm inputs which food farmers used or planned to use for farm production, thus negatively impacting on outputs and perhaps, quality of farm produce

Women food farmers are again more affected than men in terms of quantity of farm inputs used as a higher proportion of women (33.00 percent) used fewer and much fewer quantities of inputs compared with men (19 percent). This again reflects the fact that women food farmers are more negatively affected by covid-19 than their male counterparts.

The overall impact of the shortage of paid labour supply, inadequate availability of farm inputs and the high cost of the inputs which has affected the use of these inputs has led to a remarkable decline in the quantity of harvest by famers during the period after March 2020. Covid-19 also led to interruptions in the availability of labour for harvest, post-harvest handling, transportation and storage activities, leading to high post-harvest losses, especially for perishables. It is argued that agricultural production has been decreasing, because fewer people are now working in the fields due to social distancing regulations and fear of contracting the disease. Furthermore, covid-19 has reduced the frequency of farm visits by extension officers who provide technical support to farmers.

Although a large proportion of food farmers are engaged in subsistence production in which case they consume a significant proportion of their products, many of them also sell proportions of their farm produce so as to generate income with which they buy other food items not produced by household. The covid-19 pandemic has brought challenges to food farmers in terms of being able to sell their surplus food items, especially when most of them do not have adequate storage facilities for their surplus food items. The movement of farm products from rural to urban centres was severely affected by the crisis.

Food farmers rely mainly on private transporters to transport produce from the farms to urban markets. Due to covid-19, farmers find it difficult to supply produce to markets due to restricted movement of vehicles. The transport system has been slowed down, and at times, it is unavailable because of travel restrictions. A number of transporters fear taking risks and don't turn up to collect farm produce. Furthermore, as a result of the escalating costs of fuel, the cost of hiring vehicles became unaffordable for many food farmers. Very few people have their own means of transport, so they depend on privately operated vehicles for transportation. Due to the pandemic, buses and motorcycle taxis are not fully operating, or take fewer passengers and charge higher prices. This affects people in numerous ways: Hired labourers were no longer able to travel to other farms; and farmers who try to sell their products in neighbouring towns were no longer able to make a profit. Rising transportation costs were also brought up as the reason for increased prices of products sold in village stores.

It was found that majority (50 percent) of the food farmers sold some of their farm produce since March 2020. A greater proportion (27.33 percent) of the food farmers that sold part of their farm produce are women compared with 23 percent men. The findings of the survey show that a greater proportion of the food famers sold their products in the local market while about 18 percent sold their produce to middlemen. While more women take their surplus products to markets, the reverse is the case for men with regards to selling to middlemen as more men sold to middlemen. The implication is that with covid-19 restrictions on movement, women are negatively affected in terms of taking their food items to markets where prices are higher than those offered by middlemen, thus reducing their livelihoods

An examination of the extent to which covid-19 has affected the prices of farm outputs shows that most of the respondents (56.01 percent) reported that the prices of their farm produce were higher or much higher compared with the preceding five years. Despite that, many food farmers were hesitant selling their food products because they do not know when the covid-19 restrictions will end and so they save their produce for family use. Here again the challenge of storage facilities confronted them as most of food farmers do not have facilities for the storage of perishable food items. It was found that over 76 percent of the food farmers do not have storage facilities. Reasons given for non-sale of products include closed market places (16.95

percent), prices offered too low (10.17 percent) and that transportation was either not available or too expensive (8.47 percent).

The covid-19 pandemic has made it impossible for government officials to perform the functions owing to travel restrictions. This means that much of the agricultural information flow that is normally given to farmers has been curtailed. In the prevailing environment, farmers had to either adjust to other income-generating activities or wait for the situation to improve. At the commencement of the covid-19 pandemic in March 2020, the Federal Government of Nigeria put in place some palliatives to cushion the negative effects of the restrictions that were imposed. However, the vast majority of the respondents (97.00 percent) reported that they did not receive any support whatsoever from government or any of its agencies.

Covid-19 and Food Marketing

The partial closure of critical food system infrastructure (rural producer markets, wholesale food markets and open-air retail food markets) led to the apparent shutting down of the traditional marketing system in Delta State as in other parts of the Niger Delta region. Partial market closures by government during the covid-19 pandemic prevented transactions between producers, traders, wholesalers, retailers and consumers. With no place for transactions, supply was reduced, prices increased and livelihoods and incomes suffered, creating a major stress on food security. Insufficient and poor access to dry and cold-chain storage compounded the marketing problems, leading to increased food loss and waste. As noted earlier, women dominate the food marketing system with over 72 percent of them as food traders. The findings showed that women comprise 45 percent of the 59.66 percent of the traders involved in retailing of food items and also dominate wholesale of food items. Again, more women have been in the food trading business for a longer period compared with the male counterparts.

The food marketers are involved in the sale of a variety of food items locally consumed in Nigeria. The vast proportion of the respondents (60.76 percent) were involved in the marketing of arable crop products such as potato, maize, yam, cassava, gari, rice, plantain, vegetable, etc. The marketing of animal products such as goats, sheep, cattle, poultry, e. t. c constitute 14.16 percent of the traders with women constituting 6.61 percent while men constitute the balance of 7.55 percent which indicates that slightly more men were involved in marketing livestock and livestock products compared with women.

The emergence of covid-19 pandemic and the associated protocol put in place by governments had some effects on the activities of food marketers in Delta State. Government precautionary measures have exempted the movement of people and goods related to agriculture and food products from covid-19-imposed controls. Traders, transporters, producers and businesses in Delta State, report, however, that frequent road closures, police-enforced checkpoints and government-imposed “lockdowns” on free movement of people, limited transportation of agricultural and food products between rural and urban areas. These restrictions reverberate through the food production system affecting food supplies in urban areas and the transport of food produce from rural communities to urban areas. This situation has affected the number of customers and volume of sales. It was found that the vast majority of the respondents (80.01 percent) reported that the number of customers patronising them declined since March 2020 with women again more negatively affected with 58 percent of them reporting lower patronage compared with men that had 22.01 percent.

With regard to the volume of sales, respondents pointed out that although government restrictions on movement tend to exempt the transport of local food items and other related goods but there were still restrictions on the movement of farmers living in localities close to urban areas that often come (daily or weekly) to the urban markets to sell part of their crops and return to the village with manufactured goods. These restrictions on rural-urban travel and the closure of rural markets thus affected traditional mechanisms of destocking of local agricultural products by farmers, particularly in collection markets. This situation also affected the marketing of livestock by pastoralists and agro-pastoralists. The vast majority of the food marketers (83.34 percent) reported that their sales declined since the introduction of covid-19 precautions by government. Indeed the sales volume of over 44 percent of the food marketers decreased by more than 50 per cent.

The stock levels of food products being sold by the marketers were also affected by covid-19 as over 76 percent of the food marketers reported that their stock was much lower due to the impact of the various precautionary measures that have reduced the mobility of the food marketers to replenish their supplies. However, about 10 percent of the respondents reported that their stock is much higher while another 9.34 percent indicated that there were no changes in their stock. These patterns of increase in stocks or lack of changes may reflect the fact that sales were poor and hence the supplies remain in stock. About 47 percent of women were affected compared with 17 percent for men.

With the negative impact of covid-19 on the ability of households to generate adequate incomes to meet their obligations, the vast majority of the food marketers (80.00 percent) reported that they provided credit to their customers during the period after March 2020 with 60 percent of them being females while 20 percent were males. It is obvious that women are more sympathetic to their customers during this difficult covid-19 period.

In situations where the covid-19 pandemic affected food production and the movements of food items for sale have been constrained, it was observed that prices of food items increased. The food marketers (80.57 percent) reported that the purchase price of their commodity increased since covid-19 pandemic started. The proportion of the respondents that reported that their commodity price did not increase was only about 18 percent. The food marketers also needed credit in the covid-19 period to sustain their trade but this was not forthcoming as over 88 percent of the food marketers reported that they did not receive any credit facility from any government agency

Covid-19 and Household Members' Vulnerabilities

Covid-19 has significantly impacted people's lives and livelihoods in the Niger Delta region. The widespread disruption to livelihoods has already translated into loss of jobs or income for a large proportion of the respondents, particularly impacting local food farmers and food marketers. These impacts were also slightly more prevalent among female respondents. While a lot of attention has been given to the consequences of covid-19 for societies as a whole, the debate on vulnerable groups is much quieter. Understanding the extent to which different groups are at risk, and how certain policies and programme can protect and support them, is crucial for promoting effective and equitable interventions as well as preventing the worsening impacts as a result of the covid-19 pandemic. Vulnerable groups include those living in poverty, informality, conflict and fragility, often in overcrowded settings with limited access to sanitation and healthcare and who do not benefit from subsidized wages or unemployment benefits. It also includes young people, who may struggle even harder to find decent work, women, who lack decision-making power and are disproportionately represented in healthcare, childcare and vulnerable work, and other marginalised groups who may not be able to access

the resources they need for their wellbeing.

Household access to markets: A major challenge to households during the period of covid-19 pandemic has been their ability to have access to markets for the purchase of essential items particularly food. The vast majority of the respondents (91.25 percent) indicated that there were times that they could not access the markets to purchase what they needed in their households because of movement restrictions and closure of markets. The covid-19 pandemic had considerable impact on the supply of fresh food items due to the restrictions in the movement of food items between rural communities and semi-urban and urban areas. The inability to perform normal farming and food processing activities led to crop losses and food shortages which affected different communities.

The availability of basic food items such as rice, bread, gari, yam, etc. was equally affected by covid-19 pandemic precautions. A major impediment to food security is limited distribution options. The covid-19 pandemic has interrupted all aspects of the food supply chain, including the logistics related to food handling and distribution. Even when food supplies are available, there were barriers for it reaching consumers, most especially due to movement restrictions imposed to reduce the spread of the virus.

Household access to health care facilities: As the covid-19 pandemic spreads across Nigeria, many people are heeding the advice of health experts to wash their hands. Many people in rural communities in Nigeria do not have access to running water and soap to wash hands as required by Covid-19 protocol. This is due to inadequate water infrastructure in rural communities and further, the fact that during the first few weeks of the pandemic available hygiene supplies were bought making it difficult for some households to have access to these basic hygiene materials. The survey shows that while 53.50 percent of the respondents indicated that their households always got hygiene materials to buy, some 42 percent reported that these materials were partially or only sometimes available for them to buy.

Essential medicines are those drugs that satisfy the priority healthcare needs of the population. As a result of the surge in the pandemic, which led to the inevitable lockdown of the Nigerian economy, there has been a noticeable decrease in production and exportation of raw materials as well as finished products (drugs) across different countries. These greatly affected the ease of access to these medicines by the consumers who need them either for treating acute ailments or for the management of chronic diseases. Nigeria is in its early stages of pharmaceutical development; thus, they rely on importation of drugs, raw materials, and equipment from other countries, notably India and China. Nigeria is highly dependent on other countries for its medicinal needs. The covid-19 pandemic also caused an increase in the prices of medicines, hand sanitizers, face masks, personal protective equipment, and other medical equipment used for providing health care. Some 47.75 percent of the respondents reported that essential medicine/drugs were not available in clinics and pharmacies within their reach all the time since the covid-19 pandemic while 34.75 percent indicated that these essential medicines/drugs were partially or sometimes available but usually expensive.

Households and food prices: The combination of reduced supply resulting from restrictive measures and panic buying that reduced the availability of certain food has resulted in price increases in markets. Staple food price trends were mixed during the pre-covid-19 period through May in the region on a month-on-month basis. Two contrasting effects were observed. The measures reduced business activities and increased unemployment, resulting in reduced demand. At the same time, transport delays including screening of truck drivers at borders adversely affected supplies. The net effect was a slight elevation of prices moderated by reduced demand and purchasing power.

Likewise, the border closure limited food imports, further shrinking the supply chain. These developments have led to increases in price of food items which impacted on household ability to purchase the food they wanted. This observation is confirmed by the fact that the consumer price index for food has increased all through the pandemic period. It rose from 14.9 percent in February 2020 to 15.18 percent in June 2020, showing an increase of about 0.28 percent within only four months. It rose sharply to 17 percent by September 2020. This is a considerable rise from 13.39 percent in July 2019 and 14.09 percent in October 2019. The survey shows that over 94 percent of the households reported that there have been increases in food prices since March 2020. Thus, households in the study area have experienced dramatic increase in prices of food constituting a major challenge to their standard of living and adequate nutrition.

Household shopping behaviour: The outbreak of covid-19 has already caused an array of changes in shopping behaviour among households in the study area. It was found that 92 percent of the respondents reported that the covid-19 pandemic and the measures introduced by government have led to changes in their shopping behaviour compared with the situation before the pandemic. A major component of the behavioural shopping changes relates to buying smaller quantities (85.25 percent). This phenomenon is a reflection of the declining resources available to the households.

Households and livelihoods: The livelihoods of vulnerable rural households in fragile environments such as Niger Delta region have been strongly affected by the unprecedented circumstances of the covid-19 pandemic. As traditional resilience mechanisms falter, vulnerable households in Niger Delta are confronting worsening economic conditions and a breakdown of the traditional resilience mechanisms that they rely on. The survey result shows that 94 percent of the respondents reported that the covid-19 pandemic affected their ability to carry out their livelihood activities while just 6 percent reported that the reverse was the case. This is explained in terms of movement restrictions, reduced demand for the goods and services which they provide and their concern about leaving the house so as not to contract the virus. It was in this context that 71 percent of the respondents reported that the covid-19 pandemic had severe impact on their livelihood sources while 19.75 percent pointed out that covid-19 had only a moderate impact on their livelihood.

Access to education: The Covid-19 pandemic and the containment measures introduced by government had considerable impact on the access of households to key social and economic services. The focus of this section is mainly on education which most households regarded as a major challenge to their welfare and that of their children. Governments in Nigeria closed down educational institutions early in March 2020. School closures prompted by the pandemic are reducing children's opportunity for class room or face to face learning. Closures of educational institutions hampered the provision of essential services to children and communities, including access to nutritious food, affect the ability of many parents to work, and increase risks of violence against women and girls.

Over 80 percent of the respondents reported that they had children in primary or secondary schools during the period schools were closed down by government. Of the respondents that had children in primary and secondary school about 44 percent of them reported that their children have been engaged in some form of education or learning activities since Mid-March 2020 while 37.25 percent indicated that their children have not been in school. For those children that were engaged in some form of learning, these were engaged in a series of largely informal education or training including studying or learning on their own (21.74

percent), taught by parent or other household members (15.03 percent) and session/meetings with lesson teachers (15.0 percent). It is obvious that these forms of engaging the children in education were temporary and not sustainable in terms of advancing the learning programmes of the children. It can therefore be concluded that basically covid-19 has not allowed the children to make progress in their education since March, 2020.

Covid-19 and Household Food Security: Restrictions of movement within Delta State and across the country is disrupting local and inter-state food supply chains and affecting the availability of food as well as labour markets and supplies of critical agriculture inputs. This has posed a challenge for food production and jeopardized food security for most households, especially the poor and marginalized. Access to food is becoming increasingly difficult for the most vulnerable. As the covid-19 crisis unfolds, disruptions in domestic food supply chains, other shocks affecting food production, and loss of incomes and remittances are creating strong tensions and food security risks in many communities. In effect the covid-19 pandemic is having a devastating impact on already fragile livelihoods.

The survey shows that 73.25 percent of the respondents reported that some members of their household had to skip a meal because there was not enough money or other resources to get food since mid-March 2020 while only about 26 percent reported that all members of their household had enough to eat during the period. Another indicator of food security explored was the reason why households ran out of food stocked - because of lack of money or other resources since mid-March 2020. It was found that the vast proportion of the households (77.75 percent) reported that they ran out of food because of lack of money or other resources since mid-March 2020. On the other hand, about 22.25 percent indicated that their household never ran out of money for food during the period. Similarly, 33.50 percent of the respondents stated that they had difficulties eating enough food in relation to their normal (pre-covid-19) ration.

A significant proportion of the respondents (46.50 percent) reported that they skipped meals or ate less than usual during the period. Some of the respondents (6.25 percent) even reported that they went whole days without food while an insignificant proportion of them (1.25 percent) reported that they increased their food intake during the period. Finally, it was found that 53.5 percent of the households had food stock for less than one or two weeks while 13.25 percent reported that they had stock of food that can last them for between three and four months. Less than five percent indicated that they had food stock that can last for more than one month.

Gender Dimension of covid-19: Throughout history, women and girls have been affected negatively and at a disproportionately higher rate by the outbreaks of epidemics and pandemics, and covid-19 hasn't been an exception. Existing social and cultural norms and practices in Delta State that underlie structures of systemic gender discrimination and marginalisation glaringly manifest themselves. While the COVID-19 crisis affects everyone, women and girls face specific and often disproportionate economic, health, and social risks due to deeply entrenched inequalities, social norms, and unequal power relations. Although the data from the surveys as presented in the earlier sections of the report indicated various ways in which gender disparity is manifested by the covid-19 pandemic and the associated containment measures put in place by government, some further analysis of the gender component of covid-19 is presented in this subsection.

In the first place, women lack adequate access to information and health services particularly as it relates to covid-19. Traditional gender roles ascribed to women often means that they are primary care-givers for sick family members, a situation which exposes them to the risk of contracting and transmitting covid-19. The closure of schools further exacerbates the burden of unpaid care work on women and girls, who absorb the additional work of caring for children.

Second, women are more disadvantaged with respect to the negative impact of covid-19 as regards livelihood impacts. The direct implications of prevention measures, such as travel restrictions, have adversely impacted livelihoods and economic security of women in the informal sector. While government-imposed restrictions on the physical movement of citizens are currently necessary, they tend to increase women's burden of household care, which leaves them with less time to access or choose potential livelihood options. Furthermore, women and girls are at greater risk of experiencing increased gender-based violence including domestic abuse, as a result of prolonged periods of confinement within homes and increased tensions within households due to economic hardships. Finally, women's key role as food and nutritional needs providers to their families mean that Nigerian women who form a greater majority of Nigeria's informal economy workforce are the ones tasked with the risk of visiting informal market systems to purchase food items during this covid-19 period.

Conflict Dimension of covid-19: Conflicts and violence are not new in the Niger Delta region. The Niger Delta, the oil-producing core of Nigeria, has for decades suffered from oil pollution which has led to the loss of livelihoods and sources of food for locals. In the last decade, clashes between armed groups in the area and the security forces reached an all-time high; kidnappings, and destruction of oil infrastructure at a phenomenal rate. Conflict and economic turbulence have been the key drivers of food insecurity in the region. Despite the challenges of the covid-19 pandemic, the activities of militant groups and herdsmen have continued to ravage the area. The Niger Delta dominant militant groups have often operated via kidnappings and oil bunkering. The herder–farmer conflict is associated with struggle over scarce resources, land ownership, proprietorship and community ownership.

Another dimension of conflict and the covid-19 pandemic in the Niger Delta region, as in most parts of Nigeria, relates to violence associated with the resistance of the people to the restrictions in movement within and outside the region. People in the region felt that they have been denied of their rights being confined only in their houses, preventing them from hustling to meet their daily needs and restricting their freedom without providing them with commensurate palliatives or succour. Thus, they have resorted to different forms of agitations in the form of protests and riots. It is assessed that the high incidents of protests and riots could fuel community transmission of the coronavirus in the region. Also, security threats such as violence against civilians which includes rape, sea piracy attack, abduction and torture were perceived to be higher during the coronavirus period than before. The Niger Delta region is still at risk of security threats despite the easing of the restrictions and rolling out of palliatives, which have not reached the vast majority of the people.

Covid-19 and climate change: In the Niger Delta region, severe movement restrictions during the pandemic have combined with existing food insecurity that was already high due to droughts, flooding and pest infestation. Similarly, in many parts of the Niger Delta, the pandemic is hitting especially hard in communities that were already suffering from serious loss of livelihoods due to shifting rainfall patterns and extreme weather. In these settings, the combination of climate-induced socioeconomic vulnerability and the negative impact of the pandemic are driving further armed group activities. It is observed that policy makers treat covid-19 and the impacts of climate change separately, rather than as a set of combined risks that require emergency responses. In the context of the Niger Delta region, there are three components of the relationship between the pandemic and climate change.

First, widespread lockdowns, economic inactivity, especially oil exploitation and travel bans have resulted in a significant reduction in greenhouse gas emissions at least within the region.

However, the reduction in emissions as a result of covid-19 and how this plays into the fight against climate change is obviously limited because we have to keep in mind that these closures are temporary. Second, the dramatic rise in single use plastic due to the demand for products to keep covid-19 at bay including masks, visors and gloves is contributing to climate hazards. Effectively, the impact of the pandemic will serve to intensify the pollution and climate issues associated with rise in single use plastics which are not properly treated and disposed of appropriately. Finally, in mobilizing funds for climate change containment activities in the circumstances of competing socio-economic development needs, there is a chance that accessible climate finance will be compromised. This will have implications on the region's capacity to adapt to the ongoing negative impacts of climate change. The unfortunate reality is that the long-term effects of climate change will be more disastrous than the current impacts of covid-19, with the region's most vulnerable populations bearing the brunt of these effects.

Policy Issues and Recommendations

The sustainability of food production and food marketing during and after covid-19 will depend, in large part, on policy responses over the short, medium and long term. Some of the possible short and medium term policy issues are outlined as follows:

Local food production

(i) Many communities rely on markets, especially in urban settings, capacity for home food production and/or processing is limited, and local production systems are unable to cope with shocks. Therefore, governments need to increase household and community food production through distributing seeds, tools, and fertilizers for small farmers and urban gardens during and after the pandemic. In addition, governments could help by providing local agricultural and livestock extension services and technical assistance.

(ii) To meet immediate needs of the most vulnerable population in rural communities, governments, non-governmental organisations and private sector actors should invest in food storage facilities in the rural areas and possibly create improvised food market channels for the rural populace to purchase essential farm inputs and food items at regular prices.

(iii) More efficient, sustainable and resilient local food production systems require careful management of land, soil, and water through integrated approaches. Such food systems also require reduction of post-harvest food losses at every stage of the value chain with improved practices. These include access to low-cost handling and storage technologies, and packaging.

(iv) Ensuring that agricultural actors and activities at all levels, particularly harvests, are not severely affected by the unintended consequences of the containment measures and restrictions on movement, while keeping safe the work environment of food producers and farm workers.

Marketing of local food

(i) Regular, consistent and concise communication with clear messages on the food situation is critical to reduce panic, maintain confidence in agriculture and food sector and feel secure about the availability of and access to food. People in rural and urban areas need information on market operations and good health practices when working and shopping.

(ii) Food marketing interventions must address all food system channels – modern, traditional (open markets, small stores) and informal (street vendors). Each channel serves different

markets and parts of the population, helping to maintain a resilient food system that is imperative to minimizing the impact of covid-19 on society.

(iii) Just as governments need to address key regulatory barriers and policy responses that may undermine national and intra state food trade, so must they ensure that the movement of local food continues to flow unimpeded during the period of covid-19 restrictions and post Covid-19 precautions

(iv) Allow rural markets to operate with modest restrictions and precautions. Ensure farmers can farm, which may mean guaranteeing supplies of fertiliser, seed and fuel, and in some cases, allowing seasonal labour to move for harvests. Remittances will probably fall, but for those still flowing, transmission from urban to rural areas must be facilitated. This will require training and empowerment of all parties involved as well as compliance monitoring.

Food Security

(i) As livelihoods of millions of people are likely being disrupted, food insecurity is an urgent challenge. Among those that will require food services are expected to be urban poor populations affected by the lockdowns. At the same time, humanitarian support to most vulnerable groups needs to be planned with food commodities secured supply chain.

(ii) Federal and State Governments and other key stakeholders should ensure that people must obtain the food they need, especially the most vulnerable individuals (infants, young children, women, elderly people, homeless people, people living with HIV/AIDS and other chronic illnesses, disabled people, and homebound individuals).

(iii) To end restrictions on transportation and disruptions in markets that may quickly create shortage problems, governments and allied stakeholders should educate the public about the critical need to prepare for food shortages at the household level by promoting responsible levels of stockpiling, home production, processing and food preservation.

Household livelihoods

(i) Compromised livelihoods and especially reduced food consumption in many households call for urgent action. Safety nets and other economic and health policies are needed to address these shortfalls. Currently, few of survey respondents are receiving support from social safety net or palliative programmes.

(ii) Moreover, policy options to provide a cushion for the poorest of the poor may face challenges due to lack of data and ability to clearly identify those that would desperately need help. These challenges highlight not only the importance of data collection to facilitate interventions but also collective efforts in a constrained environment.

(iii) The Federal and State Governments should expand the coverage of existing social protection schemes to provide livelihood support, otherwise known as palliatives, directly targeted at vulnerable women (cash or food transfers), with priority attention to women in the informal economy and female-headed households

(iv) The Government, private sector and development partners should adopt affirmative procurement measures through the procurement of goods and services from women-owned businesses and cooperatives.

Gender

(i) Women need to be supported in order to improve and secure their productive bases. They need access to good quality arable land, a sufficient supply of good quality water, and certified seeds. They need to be supported and encouraged to adopt sustainable production systems by means of incentives, like specially adapted agricultural insurance products, storage and preservation infrastructure. The resources and leadership capacities of community-based feminist and women's rights movements must be stepped up so that they can provide women a voice and make sure that their concerns are taken into account in the strategies for coping with Covid-19.

(ii) Between 50 percent and 60 percent of the food produced by women is intended for family consumption in the study area. Men, on the other hand, generally tend to farm crops for sale and/or the agro-food sector in order to secure an income for their families. Even if their role is often forgotten or little appreciated, women are the ones who mainly ensure their families' are food secure.. It is therefore very important to encourage and support them at every step of the value creation chain so that they can play their central role in rebuilding the policies for the security and autonomy of food supply while diversifying their sources of income.

(iii) The Federal and State Governments should support the development and dissemination of messages specifically targeted at and easily accessible by vulnerable women, including women with disabilities (through use of sign language, local language). Messages should recognize women's roles as caregivers and communicate information on when and how women can access health facilities.

(iv) When it comes to food and nutrition security, women play a significant role in food production as well as transformation and food preparation. With school closed, women have an additional burden of care. Governments should sensitize men, boys and other non-gender binary people to consider sharing home chores. Governments should also ensure that all measures and policies are gender-sensitive and do not further widen the gender gap.

(v) The Federal and State Governments should systematically collect disability, age and sex-disaggregated data on the outbreak to facilitate more targeted and effective planning and implementation of the emergency response and to facilitate enhanced understanding of the gendered differences in prevention, exposure and treatment.

Conflict management

(ii) It is essential to use covid-19 as an opportunity for peace building in Niger Delta region through the following: 1. Considering the long-term impact of covid-19 interventions, and whether chosen approaches can help build resilience against violence beyond covid-19; 2. Building the covid-19 response in conflict-affected localities on existing local capacities for peace, and explore potential peace dividends in mitigating tensions, including transforming intergenerational and gender norms while ensuring that duty of care is upheld; 3. Facilitating coordination, cooperation, and learning across socio-economic and peace building sectors on what works in responding to public health crises in conflict affected and fragile contexts in a durable way; 3. Accelerating gender inclusivity and the leadership of children and youth in covid-19 response and post-pandemic peace building recovery which should include providing opportunities for children and young people to meaningfully contribute to response efforts.

Climate change

(i) The response to covid-19 has been based on unprecedented government intervention, and almost universal social acceptance of the radical measures adopted by all. The same pragmatic approach is needed for climate change policies.

(ii) Funds required for climate actions do exist, and the same approach used to mobilize Covid-19 funds should secure even greater investment in the promotion of climate change adaptation at the local level particularly through the capacity building of women leaders.

(**vi**) A fundamental reason for the recognition of covid-19 threats and the limited recognition of climate change threats is that Covid-19 has been clearly understood, beyond the health impacts, as an immediate and present threat to global development, while climate change continues to be viewed as a long term and uncertain threat to some remote communities of the world. This conception and approach must change.

Chapter 1

General Background

Research problem

Nigeria was among the first countries in Sub-Saharan Africa to identify COVID-19 (corona virus) cases and has since implemented strict measures to contain the spread of the virus (IMF a & IMF b 2020). At the same time, oil prices plummeted by 35 percent following the spread of the global pandemic. As the oil sector accounts for the bulk of Nigerian government revenue (Arndt, *et al*, 2018), this collapse in prices has profound implications for the Nigerian economy (Akanni, *et al*, 2020). The federal government is confronted with the simultaneous challenge of combating the public health crisis of the pandemic alongside trying to bolster a weakening economy.

Of major importance are the effects of covid-19 on food security in the country (Kwaw Andam, et al, 2020). In different parts of Nigeria, there are emerging signs of the negative impact of covid-19 on food security including local food production and the informal economy's food marketing system. The components of the negative impacts on food security since March 2020 include declining local production and processing of food, difficulties in moving food from production centres to final consumers in semi urban to urban areas, closed markets, rising food prices, loss of livelihoods, vulnerability to food shortage and increased reliance on social safety nets. In the context of Nigeria's Niger Delta, these challenges add to the persistent problems of climate change (drought, floods, erosion) and frequent civil conflicts with the obvious negative consequences on food production, marketing and household livelihoods.

The agricultural food system is one of the largest economic sectors in Nigeria, spanning production, industry and marketing services, especially after the ban on the importation of food in 2015. It is also one of the leading sources of employment and income generation in Nigeria, particularly for women in the country's informal economy. Indeed, over 80 percent of all food sales in the country are carried out through the informal food markets. Some of the public health measures in response to covid-19 is affecting nutrition through the food environment, which constrains and signals consumers what to purchase and encompasses availability, affordability, convenience, and desirability of various foods (FAO,2020). Food systems, diets and health care already face major limitations in different parts of Nigeria, and depend heavily on access to markets, institutions and social networks. Efforts to mitigate covid-19 tend to lead to early disruption of these vital linkages and are affecting employment opportunities, access to food and rising food prices (Breisinger, *et al*, 2020). Consequently, the number of poor people that are at risk is increasing and urgently demand food systems support to be in place.

Additional potential risks that emerged due to the covid-19 pandemic is reduced access to inputs like seeds and access through broken markets, which are endangering food production in the next agricultural cycle, and lack of labour due to mobility restriction measures. Rural areas, where covid-19 control measures tend to be more relaxed and sanitation and health facilities less well developed, could face high incidence of covid-19 cases. Food availability at markets in urban areas is declining, especially for fresh perishable foods such as fruits and vegetables (all countries) and animal sourced foods.

The direct and immediate impact of the lockdown on poverty and well-being is leading to

abrupt losses in employment especially among those that rely on the informal sector. The sector is being hit almost immediately and the hardest. Given well established historical relationship between growth, employment and poverty, the potential loss of employment and increase in poverty resulting from the current lockdown and restrictions on movements of people are enormous.

Finally, covid-19 poses a serious threat to women's engagement in economic activities, especially in the informal sector, and thus can increase gender gaps in livelihoods (Bonnet, F., et al, 2019). Pre-existing gender inequality and discrimination in Nigeria is resulting in women and girls being disproportionately affected by the pandemic, especially as a result of the measures put in place to prevent its spread (Darso, 2020). Preliminary evidence of the impact of restrictive measures indicates that Gender-Based Violence (GBV, particularly domestic violence) is rapidly increasing (Adhiambo, 2020). Cultural factors may restrict the access of women and girls to information on outbreaks and availability of services (literacy levels, restrictions on movement outside the home, etc.). While the needs of women and girls are often amplified during public health emergencies, programmes that support women and girls are often simultaneously disrupted, and often not considered 'essential'. Long-term negative effects on women and girls due to disrupted service provision can cause their physical and mental health to suffer and can impede their access to education, livelihoods, and other critical support.

Justification for this study

The covid-19 (corona virus) pandemic and its economic and social effects on households have created an urgent need for timely data to help monitor and mitigate the social and economic impacts of the crisis and protect the welfare of Nigerian society (CBN,2020). Alleviating the impacts of the covid-19 crisis is vital for preventing poverty from deepening and increasing in Nigeria; before the crisis, approximately 4 in 10 Nigerians were living below the national poverty line, and millions more were living just above the poverty line, making them vulnerable to falling back into poverty when shocks occur. Consequently, Nigerian governments will have to cater for the informal food marketing channels and also put in place measures to make them operate safely and within the covid-19 virus containment strategy. Consequently, programmes designed to contain the spread of covid-19 must be accompanied by measures to minimize disruptions to the food system. Nigeria needs to seek balance between saving lives and livelihoods. The best approach to maintain this delicate balance is ensuring that measures are pragmatic, gender responsive, flexible, localized and domesticated in context of the people with the participation of key stakeholders.

The covid-19 (corona virus) pandemic and its economic and social effects on households have created an urgent need for timely data to help monitor and mitigate the social and economic impacts of the crisis and protect the welfare of Nigerian society. In order to do this effectively and more robustly, decision makers and relevant practitioners need short-term data relating to the following: How have covid-19 interruptions affected the availability of labour for food production, harvest and storage activities, especially for perishables affected food production, marketing and nutrition? How have government-imposed "lockdowns" on the free movement of people affected the transportation of local food products between rural and urban areas, within states and food security? How has the closure of critical food system infrastructure such as rural producer markets, urban wholesale food markets and open-air retail food markets affected food marketing system and food prices? How have government –imposed 'lockdowns' on free movement of people affected the food and nutritional security of vulnerable local

populations (including the elderly, female headed households, orphans, displaced persons, women, children, health workers)? How have women, who are key actors in the food production and marketing system, been affected? What policies should be put in place to protect the capacity of local food production and the food marketing facilities?

Tracking how people's lives are affected by the covid-19 pandemic can enable policymakers in Nigeria to better understand the situation in different parts of the country and make data-driven policy decisions. It is against this background that the present research focuses on the collection of short-term and rapid policy-relevant data to inform government policies regarding social protection for vulnerable households, remote education, and support for informal food markets affected by shutdowns. The study examines the disruptions to food production, marketing and nutrition created by the covid-19 situation and its impact on the most vulnerable population in Nigeria using the Niger Delta region as a case study. It examines the challenges to local informal food production (quantity, types and quality) and processing and distribution in rural communities, food transport to urban markets, and supply-demand coordination problems triggered by the restrictions put in place by government to reduce the spread of the covid-19 pandemic. In effect the documentation of the impact of the covid-19 pandemic on local food production and food marketing systems as well as livelihood patterns in Nigeria's Niger Delta region is designed to enhance the articulation of programmes that alleviates the impacts of covid-19 on local food production and food marketing in the region in particular and other parts of Nigeria in general.

The Research objectives

The **overall objective** of the research is to contribute to IDRC's initiative on documenting the impact of covid-19 on food systems in sub-Saharan Africa by collecting short-term data on the impact of the pandemic and of government containment programmes on the most vulnerable populations in Nigeria's Niger Delta region.

The **specific objectives** are to:

(i) provide short-term sex and age disaggregated data on the impact of the lockdown on local food production with respect to access to farm inputs, labour supply and farm land and its effects on the food security crisis;

(ii) provide short-term data on the impact of market closures on the informal urban and rural food markets with respect to the prevention of transactions between producers, traders, wholesalers, retailers and consumers on the one hand and the supply of food, price increases, livelihoods, incomes and food security on the other; and

(iii) outline and disseminate key policy measures to address the identified challenges so as to protect local food production and sustain informal food markets in urban and rural areas during this period of covid-19.

Literature Review: Nigeria Response to Covid-19

The Nigerian Centre for Disease Control (NCDC) is the government agency in charge of covid-19 preparedness and response activities (Nigeria Centre for Disease Control, 2020). A Corona virus Preparedness Group was established at the end of January 2020 by the Nigerian government following the development of the epidemic in China. National NGOs, civil society

organisations, international NGOs and UN agencies are also engaged in responding to the pandemic and the effects of covid-19 containment measures. Since mid-March 2020, Federal and State Governments in Nigeria have put in place several measures to prevent, mitigate, and respond to the spread of covid-19 across the country. These include lockdowns, movement restrictions, social and physical distancing measures, as well as public health measures. The distribution of cases is uneven and has resulted in a diversified response from the Federal Government. The degree of implementation and level of compliance from the population varies from state to state; this is related to their perception of the government and trust in government directives, and different levels of education and sensitisation to the measures (Fig.1.1).

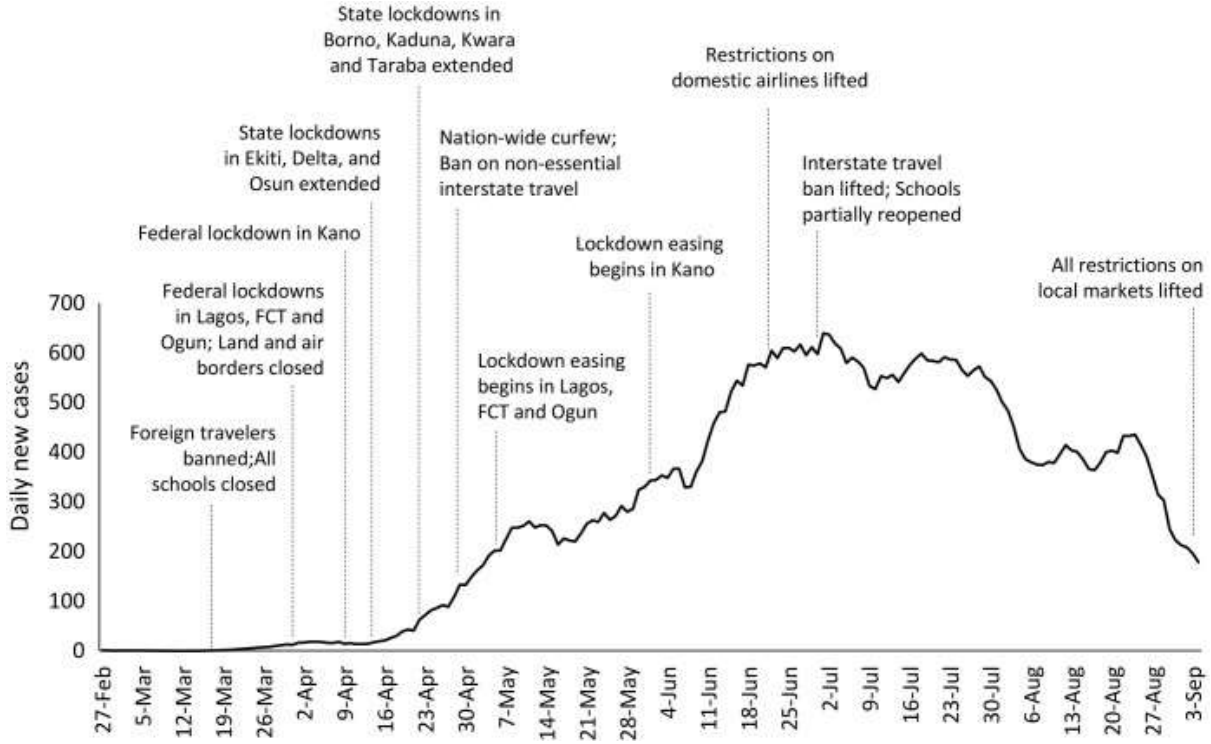

Figure 1.1: Patterns of Government Response to covid-19 in Nigeria February to September, 2020 (source)

Fig. 1.1 shows average daily increases in confirmed covid-19 infections in Nigeria, and provides a timeline of major policy responses, especially at the federal level of government. The first confirmed case of covid-19 in Nigeria was detected in a traveller who arrived in Lagos from Europe on February 27, 2020. In response, the government invested in preparedness measures, including a US$27 million increase in funding for the Nigeria Centre for Disease Control (NCDC) to strengthen laboratory testing and isolation capacity. The government also launched public education campaigns emphasizing hand washing, maintaining physical distance from people, and avoiding large gatherings.

The government's response was coordinated by a Presidential Task Force, established in early March that worked closely with the NCDC (Ameh, 2020). The NCDC has the responsibility for public health campaigns and for overall management of the testing, isolation, and treatment of patients. Nigeria's government was quick to recognize the potential scale of covid-19's economic costs and was among the first developing countries to announce fiscal and stimulus measures to cushion economic impacts (Onyekwena, 2020). These measures included reducing

government spending in anticipation of lower revenues, and providing US$130 million to support households and small and medium-scale enterprises.

More importantly, Nigeria's government was among the first on the subcontinent to enforce social distancing. All schools in the country were closed in mid-March, and several states and local authorities instituted bans on public and social gatherings. After a second case was confirmed in Lagos, Nigeria instituted bans on foreign travellers from 13 "highly-infected" countries and stopped issuing visas on arrival (Ogundele, 2020). By late-March, with 44 confirmed cases, the government closed its land and air borders to all travellers for an initial period of 4 weeks, and suspended all passenger rail services.

On 29 March, President Buhari announced specific restrictions for Lagos, FCT, and Ogun States, which together contain 14 percent of Nigeria's population. These "lockdown" measures restricted the movement of residents outside of their homes. They also closed many business operations, as well as the borders linking the lockdown states to the rest of the country. Passenger air travel was also suspended nationwide. Shortly afterwards the Presidential Taskforce issued exemptions for medical services, agricultural activities, food manufacturers and retailers, telecommunications, and certain financial services. The president also announced some palliative measures, mainly food distribution and a 2-month advance payment of the conditional cash transfers made by the government to vulnerable citizens. On 13 April, President Buhari announced a 2-week extension of the federal lockdown policies, which were also expanded to include Kano state (Federal Ministry of Budget and National Planning, 2020).

Although it was the federal government that directed lockdown measures in four states, numerous other states implemented their own lockdown policies, sometimes predating the federal policies. States with significant social distancing measures included Akwa Ibom, Borno, Edo, Ekiti, Kwara, Taraba, Niger, Ogun, Ondo, Oyo, and Rivers. These lockdowns generally started with school closings, limited trading hours in informal markets, and restrictions on large social gatherings, including religious and sporting events (Presidential Task Force, 2020). Restrictions were gradually expanded until they largely resembled the federal lockdowns (e.g., stay-at-home orders and the closing of businesses and state borders).

By the end of April, the group of states under lockdown measures accounted for almost two-thirds of the national economy. Under growing pressure to relax restrictions, the President announced that lockdowns would be eased in Lagos, FCT and Ogun states starting from around mid-May, but that the lockdown in Kano was be extended until early June. As part of the movement restrictions, on 18 March, Nigerian authorities issued a travel ban and suspended visa on arrival for all travelers coming from countries that registered over 1,000 cases domestically. On 6 May the travel ban was extended to 7 June. All commercial flights to/from Nigeria are suspended, and only essential and emergency flights are allowed to fly to and from Lagos and Abuja international airports. These include humanitarian aid, medical, and relief flights. The federal government had also ordered compulsory health screenings at airports and border crossings, 14 days' self-quarantine upon arrival for people travelling but showing no symptoms, and isolation measures for travelers showing covid-19 symptoms. However, health screenings were not implemented due to lack of capacity and resources. On 30 March, Lagos and Abuja were placed under lockdown as the cities recording the highest number of cases. Ogun state was also placed under lockdown for being very close to Lagos: many people in Ogun commute to Lagos for work. Lockdown measures were soon extended and implemented at state-level in Lagos, Delta, Yobe, Jigawa, Bauchi and Kano states, and in the FCT. The lockdowns included closure of all offices and businesses, except for shops selling food and

medicines, and hospitals. On 23 April, as the number of cases started to increase, the Government of Nigeria also banned inter-state travel, except for trade of essential goods. International trade has been significantly limited due to land, sea, and airport closures; however, food and medicines are still permitted to enter the country and travel across states.

On 28 April, President Muhammadu Buhari announced the gradual ease of lockdown measures following the negative impact of these on the country's economy and people's living conditions (Federal Government of Nigeria, 2020). A nationwide curfew between 8pm and 6am was announced as the lockdown was eased. Businesses were gradually re-opening, mostly in Lagos. Schools and places of worship remain closed across the country to prevent social gathering and allow physical distancing. Bars, restaurants, and cinemas remained closed. Wearing of face masks was made compulsory when in public places, shops, and on transportation. International and national passenger flights and inter-state travel remained banned. The government has also announced socioeconomic programmes to ease the impact of covid-19 containment measures (Nnabuife, 2020). These include a moratorium for loans received by businesses within the framework of the Government Enterprise and Empowerment Programme and cash transfers of NGN20,000 to some 2.6 million poor households for a period of four months. Food distribution has also been scaled up by the government in response to covid-19 containment measures. During June, and despite continued increases in daily cases, the government lifted restrictions on domestic airlines and interstate travel and allowed schools to reopen for graduating students. The number of new cases peaked at the end of June and fell during July and August. On 3 September, the government lifted all remaining restrictions on local markets.

Nigeria, like most other developing countries, finds herself in perilous times faced with a twin-threat; the health crisis emanating from the covid-19, and an economic crisis with an already rapidly contracting fiscal space amidst a global recession. Commendable efforts to contain the virus at home are certainly underway and intensions behind policy decisions are well reasoned and used elsewhere. However, literal implementation of measures pioneered elsewhere may instead clash with the fundamentals that drive the country's unique economic and social structures and could disproportionately impact its most vulnerable populations.

The Case Study Area

Delta State is one of the thirty-six states forming the Federal Republic of Nigeria. It was part of the defunct Bendel State of Nigeria. The state came into existence on 27 August 1991, when it was created as a separate state from the former Bendel State by the then Military Government. Delta State was initially made up of twelve political divisions called Local Government Areas (LGAs), which later increased to 19 in 1996. Presently there are 25 LGAs in Delta State (Fig. 1.2). Delta State has a land area of 16,842 square kilometres and its geographical location is defined as follows:

Longitude 5^{O} 00' and 6^{O} 45' East of the Greenwich Meridian
Latitude: 5^{O} 00' and 6^{O} 30' North of the Equator

Delta State is bordered by Edo State to the north, Anambra and Rivers States to the east, Bayelsa State and the Atlantic Ocean to the south, and Ondo State to the west. The shape of the state is less compact, compared with its neighbours, such as Edo, Anambra and Bayelsa; the distance of the Eastern boundary to the Western boundary being about 165 kilometres, while that of the northern boundary to the southern boundary is about 125 kilometres.

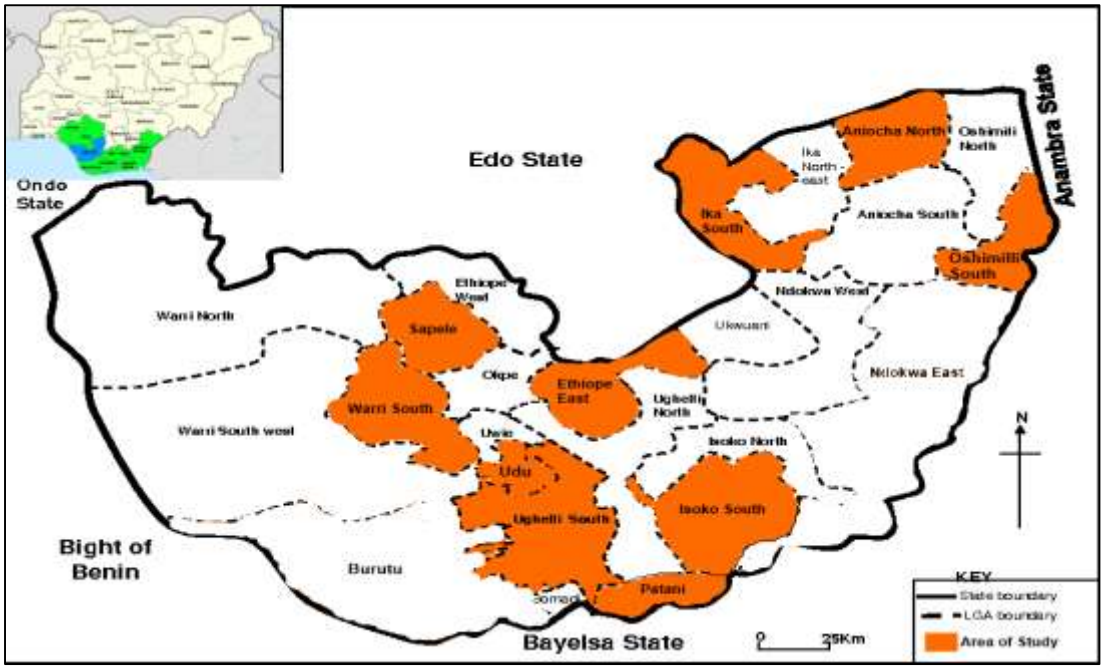

Figure 1.2: Map of Delta State Showing the Study Local Government Areas

The location of Delta State within the Federation of Nigeria has been a major economic advantage. It is situated in the heartland of the Nigerian economy, as it is the highest producer of petroleum amongst the oil-producing states in the country. A large number of oil-producing companies are based in the state, while many petroleum-related industries are also located in it. Thus, Delta State, located in the centre of oil production in the country, has great potential to profit to the extent that the industry stimulates economic growth of the state. This project focused on Delta State in terms of primary data collection. Delta State in Niger Delta region is also the region covered by the on-going IDRC project on "*Women's Empowerment for Climate Change Adaptation*."

Methodology

The *rapid assessment approach* was used to collect the short-term data entailing the triangulation of quantitative and qualitative methods. Primary data were collected from 10 randomly selected local government areas including 5 urban and 5 rural areas. Within the selected urban and rural communities a total of 2,000 questionnaires were administered as follows: (i) 600 Food Producers Questionnaires were retrieved and used for analysis; (ii) 600 Food Marketers Questionnaires were retrieved and used for analysis; and 800 Household Questionnaires were retrieved and used for analysis. Furthermore, qualitative data collection entailing key informant interviews and focus group discussions were carried out in the 10 local government areas. The survey covers important topics including knowledge and concerns about the pandemic, access to food and other basic needs, employment and income loss, and safety nets and coping strategies. The data collected also include those relating to the nature and types of lockdown measures imposed by various governments; data on the nature of labour availability and various farm input supplies for local food production; data on the frequency of market holdings and the types of food marketed; and data on the impact of lockdown on household livelihoods and vulnerability.

Quantitative data collection used largely *mini-surveys* entailing the following: First, information on lockdown measures at the Federal, State and Local Government levels were

collected from relevant Ministries, Departments or Agencies. Second, questionnaires were administered to representatives of food producers mainly in rural communities. Third, questionnaires were administered to representatives of food marketers in urban and rural communities. Fourth, questionnaires were administered to representatives of households inclusive of all categories of the vulnerable. All the questionnaires focused on the challenges of covid-19 containment measures imposed by government with respect to local food production, purchase and marketing of food items, and cost of food items. Considering the rapid data collection nature of the study, the sample size for the questionnaires, which were administered by trained field assistants, ranged from 600 to 800 per category but their selection was random to ensure representativeness.

On the other hand, qualitative data collection entailed the following: First, *in-depth interviews with key informants* was carried out including policy makers, community leaders, leaders of food market associations, women heads of household, women food traders, health workers, women leaders and leaders of food producers in order to provide more in-depth discussion of the impact on them and others of covid-19 pandemic and the associated government measures on food production and marketing. Second, a series of f*ocus group discussions* were organised to obtain rapid data from a purposely selected group of individuals comprising food producers, processors, community leaders, food marketers, especially women and girls. Again, the focus of discussions was on the impact of covid-19 pandemic and the associated government measures on their economic activities and livelihoods with respect mainly to food production and marketing as well as various other sources of livelihoods. At least 9 persons were interviewed in each LGA comprising 3 food producers, 3 food marketers and 3 food consumers/householders. Therefore, a total of about 90 key informants comprising at least 65 percent females were interviewed in the 10 LGAs. Also 10 FGDs were held in the project location comprising a mix of males and females of between 11-13 experienced food producers, food marketers, community leaders including women leaders

Quantitative data were rapidly analysed as they were collected entailing variables definition and measurement and the use of SPSS for the data analysis to generate the output. Outputs are presented as frequency distribution, histograms, bar charts, and cross tabulation etc. On the other hand, qualitative data analysis entailed the *transcription of interviews*, *coding* during which codes were assigned to the chunks of data and finally the determination of similarities, patterns and relationships. Feedback meetings were held with key stakeholders, respondents and the women in particular were invited to participate in the feedback meetings which provided opportunity for them to be engaged in the discussions of the results. Their comments, views and input were integrated into the preparation of this final report, particularly the policy recommendations.

The implementation of the project responded to the covid-19 containment measures put in place by the Federal and Delta State governments as follows: First, meetings of the project team were either virtual or physical. During physical meetings temperatures of participants were taken, water and soap for washing hands were provided, sanitizers were provided, social distancing was maintained and wearing of face masks was compulsory for all who attended the meeting. Second, during mobilisation visits to key stakeholders to introduce the project, interactions strictly observed the keeping of distance and the wearing of face masks. Third, during the training of field staff, covid-19 compliant measures were observed as described above with respect to all project meetings including provision for washing of hands, sanitizers, social distancing and the wearing of face masks were compulsory. Fourth, during fields surveys entailing key informant interviews, focus group discussions and the administration of

questionnaires to households, food producers and food marketers' respondents were further enlightened on covid-19 compliant measures as specified by government. Such survey meetings with respondents' put into practice the provision for washing of hands, sanitizers, social distancing and the wearing of face masks by all participants. Finally, during feedback meetings with survey respondents and workshops with stakeholders covid-19 guidelines was strictly adhered to. These include: provision for washing of hands, sanitizers, social distancing and the wearing of face masks.. In all cases, participants at the meetings were organised into smaller groups in line with government protocols for containment of the spread of covid-19.

Chapter 2

Socio-Economic Background of Respondents and Awareness of the Covid-19 pandemic

Introduction

Disadvantaged socioeconomic position in any society is widely associated with disease and mortality, and there is no reason to think that this will not be the case for the newly emerged covid-19. Socio-economic position has-been previously established as a potential determinant of infectious diseases in general. Individuals with a more disadvantaged socio-economic position are more likely to be affected by most of the known risk factors of covid-19. However, the influence of socioeconomic factors on covid-19 transmission, severity and outcomes is not yet known and is subject to scrutiny and investigation. In this chapter we briefly examine the demographic and socio-economic conditions of the respondents in the survey comprising food producers, food marketers and households which can contribute to the understanding of the degree of the impact of the containment measures put in place by governments in Nigeria.

Demographic and Social Characteristics of Respondents

The population of Delta State, as in other parts of Nigeria, is significantly youthful in character as reflected in the age distribution of the respondents in the survey. Table 2.1 shows that the vast majority (over 85 percent) of the respondents were below 60 years. Respondents of working age (20-59) were about 80 percent while those below20 percent constitute less than 5 percent. Respondents aged 61 and above constitute less than 15 percent. Table 2.1 further shows that differences in age distribution are quite insignificant among the three categories of respondents i.e. food producers, food marketers and households. Nigeria has a youthful population, but young people tend to be less interested in agriculture and more likely to migrate to urban areas. This leaves a slightly older farming population that could be more vulnerable to the corona virus.

Table 2.1: Percentage distribution of respondents by age

Respondents	Less than 20 years	20-39 years	40-59 years	60 years and above	Total
Food Producers	2.33	40.67	47.33	9.67	**100.00**
Food Markets	3.00	38.33	46.66	12.00	**100.00**
Households	5.25	44.50	42.00	8.25	**100.00**
Average Total	**3.53**	**41.17**	**45.33**	**9.97**	**100.00**

The overall sex composition of the respondents, as indicated in Figure 2.1, shows that, on the average, there were more females than males in the sample of food producers, food marketers and households in Delta State. However, there are some differences in terms of the sex composition of the respondents among the three categories of respondents. The proportion of females is highest among the food marketers with over 70 percent compared with 59.0 percent among food producers and 60 percent among households. The findings show that among the

three categories of respondents, women dominated local food production and local food marketing systems. This suggests, therefore, that women would obviously be more impacted by the covid-19 containment measures put in place by the Federal and the various State Governments in Nigeria.

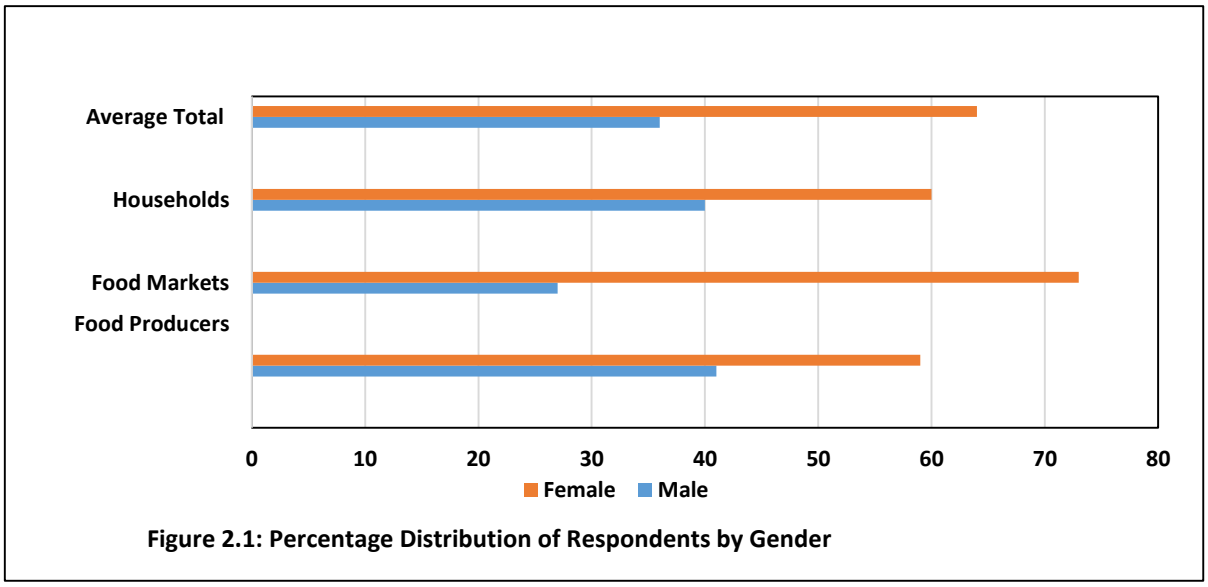

Figure 2.1: Percentage Distribution of Respondents by Gender

In traditional Nigerian societies, the practices of polygamy and early marriage of young adults are common. By age of 19 years, a significant proportion of the females are married and they tend to stay in their marriages despite any possible challenges. However, the situation is changing as more women now wait for a longer time before marriage. Table 2.2 shows that the overall proportion of the respondents that is single was less than 15 percent among food producers and food marketers. However, it was about 21 percent among the sampled households. The proportion of respondents that are married were over 60 percent among the three categories of respondents. The proportion of the respondents divorced, separated and widow were quite small as they combine to account for less than 20 percent.

Table 2.2: Percentage distribution of respondents by Marital Status

Respondents	Single	Married	Widowed	Divorced/separated	Total
Food Producers	11.00	72.00	10.00	7.00	**100.00**
Food Marketers	13.00	68.33	13.34	5.33	**100.00**
Households	21.25	64.50	10.00	4.25	**100.00**
Average Total	**15.08**	**68.28**	**11.11**	**5.53**	**100.00**

This pattern indicates that a relatively high proportion of respondents were matured and responsible enough to describe the impact of covid-19 policies on their food production and food marketing activities as well as on their household livelihoods. They can therefore provide

relevant information with which to assess their vulnerability to the impact of covid-19 containment measures put in place by government.

The findings of the household survey show that the majority of them have memberships of between 3 and 8 members. The average household size was 6 which show that the household size among the respondents is slightly higher than the average for Nigeria as a whole, which is about 5 people (NBS, 2012). Table 2.3 further shows that there are largely insignificant differences among the three categories of respondents in terms of household size. The relatively large household size that characterise the sampled food producers, food marketers and households indicate that covid-19 impacts are bound to affect a large number of people within each household.

Table 2.3: Percentage distribution of respondents by household size

Respondents	Less than 3 persons	3-5 persons	6-8 persons	9 and more persons	Total
Food Producers	8.33	42.34	40.33	9.00	**100.00**
Food Markets	9.33	40.34	42.00	8.33	**100.00**
Households	12.25	39.00	36.35	12.25	**100.00**
Average Total	**9.97**	**40.56**	**39.56**	**9.86**	**100.00**

Education is a human right and one of the major stimulants and impetus to development, and as such, its importance cannot be over emphasized. Education is essential in providing people with the basic knowledge and needed skills to improve the quality of their lives. In effect, a household with many educated members is likely to have better welfare and improved standard of living as well as coping with covid-19 challenges. Table 2.4 shows the educational status of the three categories of respondents, at the time of the survey. It reflects the fact that among the three categories of respondents over 80 percent had some form of western education or literate. On the whole it can be stated that a good proportion of the respondents have the capacity to read and comprehend the issues raised in the questionnaires without requiring much assistance or being dependent on the field officers for interpretation. They are also in a position to appreciate the issues involved in their vulnerability to the impacts of covid-19 on their livelihoods.

A person of working age, 15 years and above is said to be employed if he or she is engaged in an activity through which he or she earns a wage or salary, in cash or in kind. The employer could be government, private establishment or a self-engaged activity. Table 2.5 shows the industry in which the various categories of respondents are employed. Results of the survey indicate that, on the average, the highest proportions of persons employed were engaged in the farming and trading. The other activities accounted for between 10 and 20 percent of the employees. The dominance of the respondents in agriculture particularly food farming and food marketing show that covid-19 impacts would be significant on their households.

Table 2.4: Percentage distribution of respondents by the educational level completed

Respondents	No formal education	Primary education	Secondary education	Tertiary education	Total
Food Producers	7.34	16.33	47.00	29.33	**100.00**
Food Markets	7.67	16.33	49.34	26.66	**100.00**
Households	3.50	13.50	50.00	33.00	**100.00**
Average Total	**6.17**	**15.39**	**48.78**	**29.66**	**100.00**

Table 2.5: Percentage distribution of respondents by occupation

Respondents	Farming	Trading	Public sector Employment	Private Sector Employment	Total
Food Producers	45.75	35.50	5.00	15.75	**100.00**
Food Markets	24.34	65.67	3.33	6.66	**100.00**
Households	41.75	32.50	5.00	20.75	**100.00**
Average Total	**33.05**	**49.09**	**4.17**	**13.71**	**100.00**

The measurement of income level is generally a major problem in Nigeria because of the reluctance and or inability of respondents to provide accurate information on their income. Moreover, there is the problem of quantifying the real income of the rural working population because a good proportion of the production do not enter or pass through the market system but are consumed directly by the producing household. Despite these constraints, an attempt was made to extract from the three categories of respondents their earned income per month excluding what they consumed directly from their production activities. Figure 2.2 shows that the vast majority of the respondents (43.0 to 53.0 percent) earn between ₦30,000 and ₦49,000 monthly. Figure 2.2 further shows that a significant proportion of food marketers earn between ₦50,000 and ₦69,000. This suggests that food marketing is quite lucrative in terms of income generation. It also shows that covid-19 would impact more on food markers in terms of the reduction of their income.

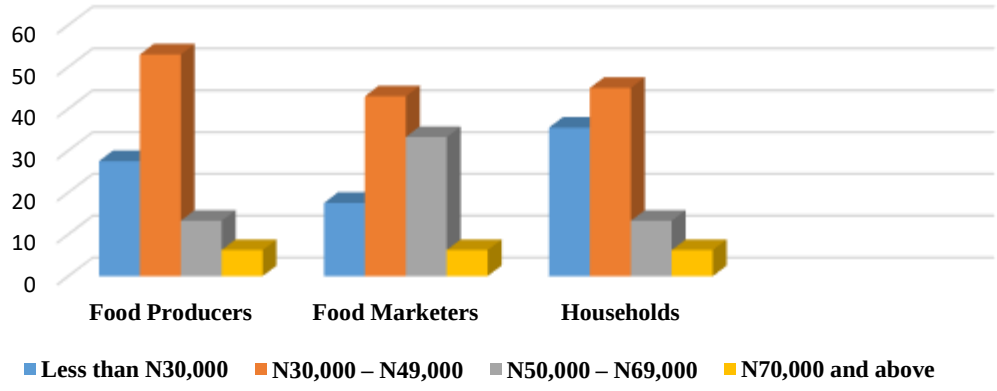

Figure 2.2: Percentage distribution of respondents by average monthly income

Respondents' Knowledge and Awareness of Covid-19 and of Government Containment Measures

Covid-19 has been recognized as a pandemic by the *World Health Organization* (WHO). Global efforts have been exerted to prevent the spreading of the disease through political decisions together with personal behaviours, which depend on awareness by the public. This section of the report attempts to assess the knowledge, perceptions and attitude of the respondents towards the covid-19 disease. Figure 2.3 below indicates that all the respondents were aware of the covid-19 pandemic while Table 2.6 shows that the vast proportion of the respondents got the information through radio and television news and advertisements. Table 2.6 shows further that family members and friends, place of worship and social media provided significant sources of information on covid-19. There are no significant differences among the three categories of respondents in terms of the sources of information on covid-19.

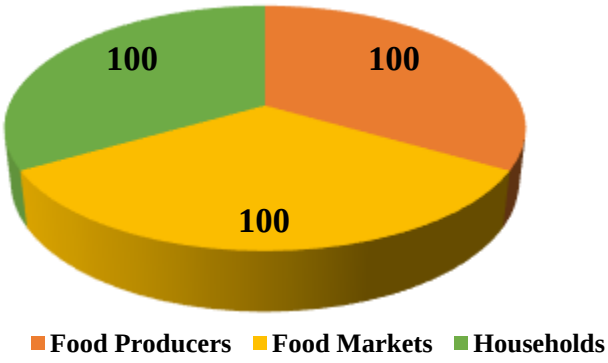

Figure 2.3: Percentage distribution of respondents who have heard about Covid-19

Figure 2.4 shows that respondents in the three categories have broad knowledge of the sources of contracting covid-19. About a third of the respondents reported that they are aware that close contact with infected persons is a major means of contracting covid-19. They also reported that touching contaminated surfaces, and touching of faces (eyes, nose and mouth) are major ways in which covid-19 can be contracted and passed it on to other members of their families. This broad knowledge of the mode of contracting covid-19 is significant in the sense that it would make the respondents to respond positively to the pre-cautionary measures put in place by governments to contain or slow down the spread of covid-19. The vast majority of respondents knew about measures to prevent the spread of covid-19, although some measures were better known than others. In terms of personal hygiene measures, over 75 percent of respondents reported knowing that hand washing was a measure to help reduce the risk of contracting covid-19 as shown in table 2.10

Table 2.6: Percentage distribution of respondents by source of covid-19 information

Respondents	Radio/TV	Family/friends	Place of worship	Social media
Food Producers	63.67	17.67	10.33	20.33
Food Markets	64.33	23.67	9.67	18.67
Households	87.67	21.33	9.33	27.00
Average Total	**71.89**	**20.89**	**9.78**	**22.00**

Knowledge of appropriate social distancing measures was high, with respondents reporting that they knew that staying at home and avoiding going out as well as avoiding crowded places or gatherings could help reduce the risk of contracting covid-19. The respondents' knowledge of the mode of contracting covid-19 is reflected in their practice of social distancing as indicated in Table 2.7 which shows that the vast majority of them (over 80 percent) reported that they engaged in social distancing during the last 7 days. However, some of them (about 17 percent) ignored social distancing in their activities during the period. There are no remarkable differences among the three categories of respondents with respect to the proportions that practised social distancing or not.

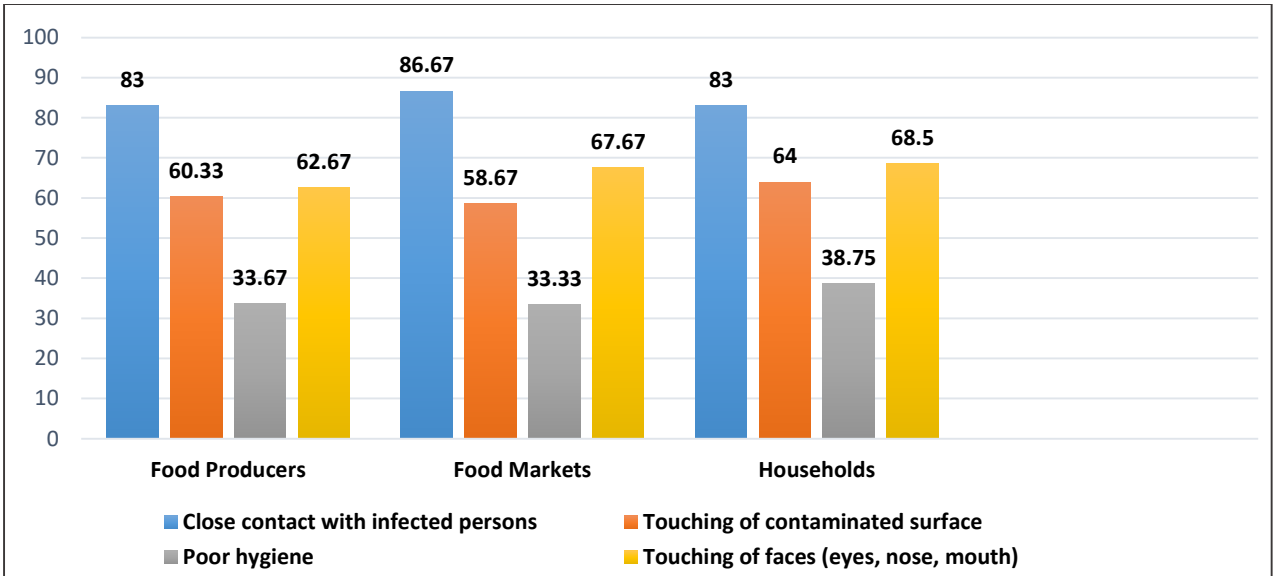

Fig. 2.4: Percentage distribution of respondents by their knowledge of Covid-19

The respondents that failed to keep social distancing during the seven-day period preceding the interviews gave various reasons for failing to do so despite the fact that they were quite aware of the need to do so. Table 2.8 shows the various reasons given by the respondents that preventing them from keeping social distancing. These include working in the farm, going to market for food, going to hospital for care, taking care of dependants, meeting friends and relatives, attending social events, becoming tired of staying indoors, etc. As indicated in Table 2.8, most of the respondents reported that going to market to buy food was the major reason for their failure to keep social distancing. It shows the significance of buying food for the family despite the risks involved. Meeting friends and relations was also a notable reason for not practicing social distance as over 55 percent of the respondents reported as such. Other reasons, such as going to farm, going to hospital, taking care of dependants and attending social functions, accounted for about 40 percent as reported by the respondents.

Table 2.7: Percentage distribution of respondents according to their practice of social distancing in the last 7 days

Respondents	Yes	No	Total
Food Producers	83.00	17.00	**100.00**
Food Marketers	81.33	18.67	**100.00**
Households	83.00	17.00	**100.00**
Average Total	**82.44**	**17.56**	**100.00**

Knowledge of all the actions taken by the government to contain the spread of covid-19 by the various categories of respondents was quite high. As Table 2.9 shows, over 55 percent of respondents reported knowing about at least seven actions taken by the government to curb the spread of corona virus: the most commonly known were advisories to stay at home, closure of schools, lockdown, curfew, and to avoid gatherings. Table 2.10 shows that most respondents reported that they were following safe practices to avoid contracting covid-19 which included staying at home, avoid gatherings, use of face masks, regular hand washing, use of hand sanitizers and keeping social distance. Table 2.11 shows that a significant proportion of the respondents were concerned about the impact of covid-19 on them and their families particularly with respect to contracting the disease, not being able to sell their food products in markets and not being able to send their children to school which were closed.

Table 2.8: Percentage distribution of respondents according to situations in which they are unable to practice social distance

Respondents	Working in the farm	Going to the market for food	Going to the hospital / receiving medical treatments	Taking care of dependents	Meeting friends or relatives	Attending a function (wedding, funeral, temple)	Becoming tired of being indoors	None of the above
Food Producer	46.33	77.33	45.33	47.00	58.00	52.33	40.33	1.33
Food Marketers	43.33	78.67	41.00	46.67	58.67	48.67	40.33	1.67
Households	36.25	65.50	35.50	37.50	50.00	41.25	31.75	2.00
Average Total	**41.97**	**73.83**	**40.61**	**43.72**	**55.56**	**47.42**	**37.47**	**1.67**

Table 2.9: Percentage Distribution of respondents according to their knowledge of actions taken by government to contain Covid-19

Respondents	Restricted Travel within Country or Area	Restricted International Travel	Closure of Schools &Universities	Curfew/ Lockdown	Closure of Non-Essential Businesses	Sensitization Public Awareness	Established Isolation Centers	Disinfection of Public Places	Ban of social gathering	None
Food Producers	72.33	67.33	74.67	77.33	52.33	56.67	47.33	38.67	78.00	0.67
Food Marketers	74.33	52.33	83.33	82.33	60.33	59.33	49.00	33.00	79.00	0.33
Households	74.00	57.75	81.50	79.50	56.50	58.75	52.75	35.50	76.00	0.00
Average Total	**73.55**	**59.14**	**79.83**	**79.72**	**56.39**	**58.25**	**49.69**	**35.72**	**77.67**	**0.33**

Table 2.10: Percentage Distribution of respondents according to measures they adopted/can adopt to reduce the risk of contracting Covid-19

Respondents	Stay at Home	Avoid gatherings	Restricted Travel within the State	Disinfection of Public Places	Use of face mask in public	Regular hands washing	Use of hand sanitizers	Keeping social distance	None of the above
Food Producers	73.00	83.33	65.67	42.33	87.33	75.33	70.33	68.33	0.33
Food Marketers	66.00	75.67	55.00	37.00	86.67	79.67	73.00	65.33	1.00
Households	69.50	78.75	59.25	47.50	88.50	77.50	70.50	69.25	0.75
Average Total	**69.50**	**79.25**	**59.97**	**42.28**	**87.50**	**77.50**	**71.28**	**67.64**	**0.69**

Table 2.11: Percentage Distribution of respondents according to their degree of concern about Covid-19

Respondents	I'm not concerned about Covid -19	Contracting the disease, myself or my family members	Not being able to get inputs for my farm	Not being able to sell my food products	Not having enough work/ wage income	Not having enough food for the household	Not being able to send my children to school	Others	Don't know
Food Producers	4.33	48.00	8.33	10.67	8.00	9.67	10.00	0.00	1.00
Food Marketers	3.67	50.00	5.00	17.00	6.00	10.33	7.67	0.00	0.33
Households	3.50	47.00	5.75	8.75	11.00	9.75	13.75	0.50	0.00
Average Total	**3.83**	**48.33**	**6.36**	**12.14**	**8.33**	**9.92**	**10.47**	**0.17**	**0.44**

Finally, the findings on respondents' awareness of covid-19 pandemic from the quantitative surveys were reinforced by the qualitative surveys as indicated by the following expressions by key informants and participants in focus group discussions.

> *"Yes, coronavirus was first discovered in Wuhan city in China. It spreads like a wide fire and it is detrimental to anyone who contracts it."*
>
> *"Coronavirus is a sickness that has been killing people."*
>
> *"It is virus that it came as a result of chemical reaction affecting and killing people leading to disruption in market and social gathering"*
>
> *"Coronavirus is a disease that is communicable i.e. it can be transferred from one person to another."*
>
> *"COVID-19 is a sickness that was spread from outside country to Nigeria. It is a killer sickness."*
>
> *"Coronavirus is a microscopic organism and also a communicable disease that can be transmitted from one person to another."*
>
> *"According to the information I got from the media and people, I understand that coronavirus is the strange disease affecting the world now. I learnt that it originated from China and has spread to other parts of the world. They said it is spreading fast and affecting people through contact and staying close together."*

Furthermore, participants in the key informant and focus group discussions also indicated that they were aware of government containment measures to combat covid-19 as indicated by the following statements by some of them:

> *"We were told to avoid gatherings (parties to be précised) and shaking of hands. We were told to also wash hands regularly with soap and water and also use hand sanitizer. We were also being sensitized on the issues and precaution to be taking to curb its spread."*
>
> *"They said we should be wearing nose mask, washing of hands, closure of school and market at a time and also restriction in movement. They also banned social gathering and also encouraged social distancing."*
>
> *"We were told to stay at home and Market was closed. There was restriction of movement, closure of schools, and closure of non-essential businesses."*
>
> *"Since the outbreak of this coronavirus, the government have put some things in place to reduce the spread of the virus. There have been restriction in the movement of people and restriction to social gathering over here. Schools were also shut down and face mask was also advised to be used."*
>
> *"First and foremost, they place curfew and lockdown. They encouraged people to be using hand sanitizers, they brought face mask for people to use. They also closed the market and took the market to primary and secondary school. They also closed down schools."*

"They normally announce it in social media, TV and radio. They also asked that we should put on facemask in public place and also avoid shaking of hands. Schools and other social gathering were also closed."

"They said no movement earlier. In our market, they brought water and soap to wash hands. They also said we should be wearing nose mask and they banned churches from operation. They banned burial and other gatherings."

"Like the local government here, they shared nose mask but it didn't get to everybody, they advised us to observe social distance, they also closed churches and all gatherings. They also closed market and moved markets to primary schools.

Chapter 3

Covid-19 and Local Food Farming Activities

Introduction

The agricultural sector is the oldest and most prominent economic activity in Nigeria including the Niger Delta region despite the fact that the region produces the country's oil which generates most of the foreign exchange earnings for Nigeria. It is also the principal source of food and livelihood in Nigeria as it employs the vast proportion of the labour force. Local food production is a particularly important component of food security in Nigeria. As a result, agricultural productivity is critical to Nigeria's ability to meet food security. Consequently, the impact of the covid-19 containment measures introduced by the Federal and Delta State Governments on local food production started manifesting itself in March 2020. Even before the advent of covid-19, agricultural production had been under severe stress, having registered poor harvests in the many previous years. Agricultural production was largely constrained by, among others, lack of access to adequate marketing, storage, transportation and lack of access to finance. Thus, the presence of covid-19 poses a severe challenge not only to food security and incomes of the rural farmers but also the entire rural economy of Delta state during the period between March and November 2020 covered by this study. The covid-19 pandemic shows the importance of local food production to cover community basic needs in times of crisis. Most of the community members we spoke to indicated that, with the increasing prices of food in stores and their decreasing incomes, local food production was their safety net.

Local Food Farming characteristics, experience and challenges during the period of covid-19

Local food farming activities in Delta State is characterised by different types of food production. Table 3.1 indicates that the majority of the food famers (51.01 percent) interviewed were mainly involved primarily in arable food production activities while over 20 percent were involved in fishery/aquatic production. Table 3.1 further shows that over 16 percent of the respondents were mainly involved in animal production while edible oil production and fruit production constitute less than 10 percent. Table 3.1 indicates the dominant role of women in local food production as they constitute about 59 percent of the respondents while men constitute the remaining 41 percent. Women were also more involved in the production of other food items except fishery activities in which there are more men than women. The implication of this pattern is that women are more negatively affected than men by the impacts of covid-19 in terms of their food production activities thereby making them more vulnerable than men. This is confirmed by the fact that women were more negatively affected by their inability to go to their farms during the period March to July 2020. As indicated in Table 3.2 over 71 percent of the respondents were not able to go to their farmland for farming activities compared with the period before covi-19. Table 3.2 indicates that over 31percent were not able to leave their house for farm work while over 40 percent were able to go to their farms for much fewer days with the consequent impact on the level of income they are able to generate.

Table 3.1: Percentage distribution of food farmers according to the type of enterprise in which they are engaged

Food farming activities	Male	Female	Total
Arable crop production	18.01	33.00	**51.01**
Animal production	7.00	9.32	**16.32**
Edible oil production	2.66	2.67	**5.33**
Fruit Production	1.00	5.67	**6.67**
Fishery/aquatic Production	12.34	8.33	**20.67**
Total	**41.01**	**58.99**	**100.00**

Table 3.2: Percentage distribution of food farmers according to the number of days household members spend on farming activities been affected since Mid-March 2020

Food farmers	Male	Female	Total
I was not able to go to the farm during this period	9.34	21.67	**31.01**
Much fewer days	20.67	19.66	**40.33**
About the same	5.34	8.33	**13.67**
More days	5.66	9.33	**14.99**
Total	**41.01**	**58.99**	**100.00**

While it remains early to gauge the impact that Covid-19 on agricultural production in Delta State, some potential pathways of impact could include (1) disrupted access to good quality seeds, fertilizers and pesticides due to market closures; (2) an aging farmer population more vulnerable to Covid-19 as young people migrate for work; (3) inability of seasonal workers who have migrated across local government or community borders to return to their land for the farming season; and (4) limited access to land to cultivate due to curfews or internal movement restrictions. Conventional inputs to agricultural production are land, labour, physical capital, livestock and fertilizer. As in many parts of Nigeria, agricultural production, especially local food production is dominated by family farming, which relies mainly on family labour. However, a large proportion of local food farmers still depend on hired labour to supplement family labour supply. Consequently, government restrictions on travel and movement had some effects on the shortage of labour. This in turn may significantly disrupt the harvesting and processing of raw food, impacting the supply chain. Table 3.3 indicates that over 86 percent of the food farmers reported that covid-19 has affected their ability to hire the required labour for their farms. Table 3.3 shows that while 58.67 percent did not hire labour for their farms since March 2020 another 27.68 percent hired labour for the lowest number of days in the past five years preceding the interview.

Table 3.3: Percentage distribution of food farmers according to how the number of days they hired workers to work on their farm has been affected since Mid-March 2020

Food farmers	Male	Female	Total
I did not hire labour on my farm during this period	17.66	41.01	**58.67**
Much fewer days, lowest number of days in past 5 years	16.01	11.67	**27.68**
About the same	5.33	4.66	**9.99**
More days	2.00	1.66	**3.66**
Total	**41.00**	**59.00**	**100.00**

Another indicator of the impact of covid-19 on labour supply and use by food farmers relates to the degree to which the farmers employed paid labour during the period after March 2020. Table 3.4 indicates that while about 40 percent of the respondents reported that they employed paid labour after March 2020, about 60 percent of them were not able to employ paid labour. Table 3.4 further shows that a greater proportion of the farmers who were not able to employ paid labour were women as 40 percent of the 68 percent of the farmers who were not able to employ paid labour were women. This disruption may also be exacerbated as women are often the primary crop producers, but are also more likely to shoulder the burden of looking after the elderly and sick and caring for children not able to go to school. There are some farming activities or skills which women may not be able to carry out on their own without the support of men. It therefore implies that when women are not able to employ paid labour their productivity will be reduced. On the problems which the respondents faced with respect to hiring farm labour, some of the key informant respondents and participants in the focus group discussions stated as follows:

> *"This COVID-19 has really affected us. There is no money, so I now work in the farm with my family. Last year, I was able to hire many labourers. But this year, there is no money. COVID-19 affected my income."*
>
> *"It was higher last year compared to this year since mid-march 2020. I have also be hiring people to work in my farm, even yesterday, I took people to the farm."*
>
> *"It affected me to the extent that I couldn't hire workers to work on my farm. I work on my farm alone."*
>
> *"The COVID-19 has reduced our capacity to hire workers. The more you produce, the more you are able to hire workers, because of the COVID-19 and the restriction in movement I left my farm crops in the farm to waste away because market was closed and middlemen are not coming as usual. So, there was no need to hire workers."*
>
> *"As a result of the restriction, there was no movement, the workers cannot come to work, and even if they come, when you are supposed to have 2 persons, 1 will be available. As a result of that the workload was much."*

Table 3.4: Percentage distribution of food farmers according to whether they employed any paid labour since Mid-March, 2020

Food farmers	Male	Female
Yes	22.34	18.96
No	18.70	40.00
Total	**41.04**	**58.96**

A further indicator of labour shortage for food farmers relates to the comparison of the paid labour employed by them compared with the same time the previous year. Table 3.5 shows that the vast majority (81.45 percent) of the respondents reported that they employed less paid labour compared with the same period the previous year compare with just 12.10 percent that reported that they employed more paid labour. The reasons why they hired less paid labour between March and November 2020 compared with the same time the previous year are indicated in Table 3.6. The vast majority of the farmers (59.40 percent) reported that lack of adequate funds contributed to their not being able to hire paid labour for their farms compared to the previous year. A further 26.73 percent reported that they did not hire paid labour because cost of hiring such paid labour has become expensive while about 13 percent indicated that paid hired labour has become unavailable at the time they need them which may be due to the impact of covid-19 hampering the movement of people because of containment measures put in place by government. Overall, it can be stated at this point that the inability of food farmers to hire the needed farm labour to work on their farms obviously affects their productivity and expected income from their farm work.

Just as the availability and use of paid hired labour by food farmers was negatively affected by covid-19 so was the availability and use of other inputs. Table 3.7 reports on the visits or otherwise of food farmers to markets or dealers of agricultural inputs to purchase farm inputs during the period between March and November, 2020. As Table 3.7 indicates about 60 percent of the farmers reported that they were able to visit agro-dealers or markets while less than 40 percent pointed out that they were not able to do so. Table 3.7 further shows that more women were not able to visit market to purchase inputs compared with men. For respondents who visited markets to purchase agricultural inputs, Table 3.8 shows that a greater proportion of those who visited agro-dealers or markets (81.00 percent) were not able to purchase the inputs they wanted while less than 20 percent were able to purchase what they wanted. Again, more women were negatively affected in that more of them compared with men were not able to purchase the agricultural inputs which they wanted. Considering the major role which women play in food production, the lack of access to agricultural inputs had negative effects on food production during the covid-19 period.

Table 3.5: Percentage distribution of food farmers according to whether they employed more or less paid labour than at the same time in the previous year

Food farmers	Male	Female	Total
More	6.45	5.65	**12.10**
Less	43.55	37.90	**81.45**
Same	2.42	1.61	**4.03**
Don't know	1.61	0.81	**2.42**
Total	**54.03**	**45.97**	**100.00**

Table 3.6: Percentage distribution of food farmers according why less paid labour was hired than at the same time in the previous year

Food farmers	Male	Female	Total
Too expensive	11.88	14.85	**26.73**
Not available when needed	6.93	5.94	**12.87**
Inadequate funds	33.66	25.74	**59.40**
Others	0.99	0.00	**0.99**
Total	**53.47**	**46.53**	**100.00**

Table 3.7: Percentage distribution of food farmers according to whether they visited an agro-dealer or market to purchase any key agricultural inputs since Mid-March 2020

Food farmers	Male	Female	Total
Yes	27.67	33.00	60.67
No	13.33	26.00	39.33
Total	**41.00**	**59.00**	**100**

Table 3.8: Percentage distribution of food farmers according to whether they were able to purchase all the inputs they were looking for

Food farmers	Male	Female	Total
Yes	8.00	11.00	19.00
No	33.00	48.00	81.00
Total	**41.00**	**59.00**	**100.00**

Table 3.9 which indicates the reasons given by the food farmers for their inability to get the agricultural inputs which they needed for their farming activities shows that lack of funds (64.80 percent) was the major factor responsible for their non-purchase of farm inputs. A significant proportion (24.00 percent) of the food farmers also reported that the restrictions on

movement negatively affected their ability to purchase farm inputs during the period. Finally, about 11 percent of the food farmers reported that the closure of non-essential business places which included shops for the sale of farm inputs affected their ability to purchase the needed farm inputs. For the food farmers who did not visit agro-dealers or markets, Table 3.10 indicates that the major reason given relates to the fact that the inputs were too expensive as over 69 percent of the food farmers reported as such. The non-availability of the needed inputs was another reason given by about 18 percent of the farmers. Women food farmers were again most affected by the price of the inputs as over 45 percent of them were affected compared with just 23.73 percent of the men.

Table 3.9: Percentage distribution of food farmers according to the reasons why they did not purchase all the inputs they were looking for

Food farmers	Male	Female	Total
Restriction of movement	13.60	10.40	**24.00**
Lack of funds	28.00	36.80	**64.80**
Closure of non-essential business places (shops for agricultural inputs are closed)	6.40	4.80	**11.20**
Total	**48.00**	**52.00**	**100.00**

Table 3.10: Percentage distribution of food farmers according to the reasons why they did not visit an agro-dealer or market to purchase any key agricultural inputs since Mid-March 2020

Food farmers	Male	Female	Total
The input was not available	8.47	9.32	**17.79**
The input was too expensive	23.73	45.76	**69.49**
The brand of the input I wanted was not available	0.00	6.78	**6.78**
Others	1.69	4.24	**5.93**
Total	**33.90**	**66.10**	**100.00**

With local food supply chains disrupted, many would naturally rely on imports but the Federal Government closed the borders to trade and travel. This has prevented farmers from being able to distribute their raw or processed foods both nationally and internationally, making it harder for farmers to be able to support their operations. Table 3.11 indicates that farmers who successfully purchased farm inputs focused mainly on animal feeds (25 percent), seeds (24.67 percent), fertilizer (20.66 percent) and pesticide (14.00 percent). With respect to the prices which they paid for the inputs which were purchased, Table 3.12 indicates that about 50 percent of the food farmers reported that prices were much higher and indeed highest compared with

what prevailed five years ago. Indeed another 34.90 percent of the farmers reported that prices were higher than they were five years ago indicating that over 84 percent of the food farmers reported remarkable increase in the prices of purchased agricultural inputs compared with what prevailed five years ago. Again, more women than men were able to buy the agricultural inputs at higher prices.

Table 3.11: Percentage distribution of food farmers according the key inputs they purchased since Mid-March 2020

Food farmers	Male	Female	Total
Fertilizer	11.33	9.33	**20.66**
Seeds	10.67	14.00	**24.67**
Pesticide	6.67	7.33	**14.00**
Animal feeds	11.33	13.67	**25.00**
None	7.00	20.00	**27.00**
Others	0.33	0.67	**1.00**

Table 3.12: Percentage distribution of food farmers according how the prices of purchased inputs compare to the same period last year

Food farmers	Male	Female	Total
Much lower, lowest price in the last 5 years	3.53	3.92	**7.45**
Lower	1.18	3.92	**5.10**
About the same	1.57	1.18	**2.75**
Higher	14.51	20.39	**34.90**
Much higher, highest price in the last 5 years	21.96	27.84	**49.80**
Total	**42.75**	**57.25**	**100.00**

The dramatic rise in the cost of farm inputs during the covid-19 period had negative effects on the quantity of farm inputs which food farmers are able to use or planned to use for farm production as indicated in Table 3.13 which shows that over 52 percent of them reported that they use much fewer or much fewer farm inputs in the past five years. Table 3.13 further shows that 49 percent of the food farmers reported that they are using or planned to use increased quantity of farm inputs compared with the situation in the past five years while about 8 percent reported that they used about the same quantity that they were using five years ago. Table 3.13 further shows that women food farmers are more affected than men in terms of quantity of farm inputs used as a higher proportion of women (33.00 percent) used fewer and much fewer quantities of inputs compared with men, that is, about 19 percent. This again reflects the fact that women food farmers are more negatively affected by covid-19 than their male counterparts. This disruption may also be exacerbated as women are often the major crop

producers, but are also more likely to shoulder the burden of looking after the elderly and sick and caring for children not able to go to school.

Table 3.13: Percentage distribution of food farmers according how COVID-19 affected the quantity of farm inputs used (or plan to use) for farm production

Food farmers	Male	Female	Total
Much fewer, fewest amount in the past 5 years	5.34	13.33	**18.67**
Fewer	14.00	19.67	**33.67**
About the same	2.33	5.67	**8.00**
More	6.00	6.00	**12.00**
Much more, highest amount in past 5 years	13.33	14.33	**27.66**
Total	**41.00**	**59.00**	**100.00**

On the problems which the respondents faced with respect to the purchase of farm inputs, some of the key informant respondents and participants in the focus group discussions stated as follows:

> *"It has affected us adversely. The COVID-19 coincided with the drought that we had this year. I use to go to the agro-business to buy my farm inputs but since the COVID-19, I now bought lesser quantity when compared to last year because the sales I made this year was not what it used to be. Prices of these inputs have also skyrocketed. This was as a result of the COVID-19."*
>
> *"Yes, due to restriction of movement, I could not go out to purchase the needed farm inputs. I sometimes sneak out with my bicycle to go and purchase few quantities of farm input. As for prices, the prices of farm inputs went up and it has been high till date."*
>
> *"I still use fertilizer for my farm. The coronavirus affected the quantities of my farm input because I don't have money as before to buy them.*
> *Prices of fertilizers and pesticide have gone higher because of the COVID-19."*
>
> *"On the issue of pricing, most of the farm inputs especially fertilizers and herbicide, their prices went up. For instance, the price of herbicide has gone up. What we use to buy for #1,000 has gone up to #1,900. For fertilizer, it has gone up considerably. Before lockdown, we use to get NPK fertilizer at ₦4,500 and UREA was ₦ 7,500 but now NPK is now ₦ 9,000 while UREA is ₦ 12,000."*
>
> *"I do purchase farm inputs. The quantity I purchased is low compared to previous years because the price is much higher."*

The obvious overall impact of the shortage of paid labour supply, inadequate availability of farm inputs and the high cost of the inputs which has affected the use of these inputs has been a remarkable decline in the quantity of harvest by famers during the period after March 2020.

Covid-19 also led to interruptions in the availability of labour for harvest, post-harvest handling, transportation and storage activities, leading to high post-harvest losses, especially for perishables. The interviewees argued that agricultural production has been decreasing, because fewer people are now working in the fields due to social distancing regulations and fear of contracting the disease. Furthermore, COVID-19 has reduced the frequency of farm visits by extension officers who provide technical support to farmers. Table 3.14 shows that over 65 percent of the food farmers reported a decline in the quantity of their harvest compared with the situation over five years ago. About 15 percent of the respondents indicated that the quantity of their harvest was the same compared with five years ago while just 15 percent reported an increase in the quantity of their harvest during the same period. As expected, more women-food farmers were affected by the decline in the quantity of harvest during the covid-19 period compared with their male counterparts and this again suggests that women are negatively more affected in their food farming activities in terms of revenue from farming activities.

Table 3.14: Percentage distribution of food farmers according how COVID-19 has affected the quantity of their harvest

Food farmers	Male	Female	Total
Much less, lowest amount in past 5 years	16.33	25.66	**41.99**
Less	8.67	14.67	**23.34**
About the same	6.67	8.01	**14.68**
More	2.33	1.67	**4.00**
Much more, highest amount in past 5 years	5.33	6.00	**11.33**
Don't know/prefer not to answer	2.67	1.99	**4.66**
Total	**42.00**	**58.00**	**100.00**

On the implications of the lack of labour and farm inputs on the quantity of their harvest, some of the key informant respondents and participants in the focus group discussions stated as follows:

> *"There are some crops you harvest here in 7 months and some in 9 months. At the time there was restriction, we could not go to the farm and when you do, you will not be able to take the produce to the market. So, some of the products got wasted."*

"It affected my harvest, because of no movement; I was not able to get labourers to my farm to harvest for me."

"COVID-19 has really affected my harvest because the restriction of movement led to increase in transportation. The increase in transportation was so high that transportation fare was sometimes more than the price of our produce so we were discouraged and allowed such produce to spoil in the farm."

Lockdown made us to be locked indoors and locked our stomach. There was no food to eat as we couldn't harvest our crops.

"Due to restriction of movement, I could not use my bike to go to farm to harvest my cassava and my palm oil. Lockdown affected my harvest and police were arresting people moving on the street."

"Yes, Last year, we sold a basket of Okro at the rate of #3,500-4,000. But this year, because of the lockdown and restriction in movement, the buyers couldn't cross from their respective states to buy. Most people, I particularly, could not sell. At a point, I left my farm and couldn't remove anything from it. A basket we used to sell for between #3,500-4,000 was sold to neighbours at #100. You can see the great loss there. The COVID-19 really affected us adversely."

"It has affected because when you are breeding birds, there's a size you want your product to ascertain before you sell but because of the increase in feeds i.e. what you are using to buy 2 bags of feed is now what you use to buy 1 bag, that means you will be reducing the feeding of the birds and that invariably affects their sizes. This is actually attributed to the restriction in movement and the lockdown because the transportation went up.

"The restriction in movement affected our harvest. The police were chasing us whenever we are on our way to the farm to harvest. Some of my vegetables got wasted."

Consumption and marketing pattern of food products by food farmers during the covid-19 period

Although a large proportion of food farmers mainly practice subsistence farming in which case they consume a significant proportion of their products, at the same time many of the farmers also sell some of their farm produce so as to generate income with which they buy other food items which they don't directly produce. The covid-19 pandemic has brought challenges to food farmers in terms of being able to sell their surplus food items especially when most of them do not have adequate storage facilities for their surplus food items. The movement of farm products from rural to urban centres is severely affected by the crisis. Horticulture and seasonal maize (corn) farmers rely mainly on private transporters to ferry their produce from the farms to urban markets. Due to COVID-19, farmers find it difficult to bring their produce to the markets. The transport system has been slowed down, and at times, it is unavailable because of travel restrictions. A number of transporters fear taking risks and don't turn up to collect farm produce. Furthermore, as a result of the escalating costs of fuel, the cost of hiring has become unaffordable for many. Many of the interviewees stressed that the crisis has caused transportation costs to rise. Very few people have their own means of transport, so they depend on public transportation. Due to the pandemic, buses and motorcycle taxis are not fully

operating, or take fewer passengers and charge higher prices. This affects people in numerous ways: Hired labourers are no longer able to travel to other farms; and farmers who try to sell their products in neighbouring towns are no longer able to make a profit. Rising transportation costs are also brought up as the reason for increased prices of products sold in village stores.

Table 3.15 shows that the majority (50.33 percent) of the food farmers reported that they sold some of their farm produce since March 2020. Table 3.15 further shows that a greater proportion (27.33 percent) of the food farmers who sold part of their farm produce were women compared with 23 percent men. The findings of the survey show that a greater proportion of the food famers sold their products in the local market while about 18 percent sold their produce to middlemen. These middlemen took the products to market place possibly in urban areas. Table 3.15 further shows that while more women take their surplus products to market compared with men the reverse was the case with regards to selling to middlemen as more men sell to middlemen than women. The implication is that with covid-19 restrictions on movement, women are negatively affected in terms of taking their food items to markets where prices are higher than those offered by middlemen.

Table 3.15: Percentage distribution of food farmers according whether they sold any of their farm produce since Mid-March 2020

Food farmers	Male	Female	Total
Yes	23.00	27.33	**50.33**
No	18.00	31.67	**49.67**
Total	**41.00**	**59.00**	**100.00**

Table 3.16: Percentage distribution of food farmers according where they sold their farm products

Food farmers	Male	Female	Total
Farm gate	3.32	3.73	**7.05**
Local market	18.67	38.59	**57.26**
To Middleman	11.62	6.22	**17.84**
Market outside the L.G.A	2.07	1.66	**3.73**
Individual consumers/neighbours	5.39	8.71	**14.11**
Total	**41.08**	**58.92**	**100.00**

Farmers expect the theory of supply and demand to work in their favour during the period of covid-19. But unfortunately, the price of farm products has not worked towards their advantage. With the government having advised people to " Stay Home, Stay safe'', only few are now turning up to open markets. Some towns and villages are going through a "lockdown'' on movements of people. The situation has caused a number of products, such as tomatoes, fruits and vegetables to be destroyed, ultimately creating loss of revenue. The survey investigated from the food farmers the extent to which covid-19 has affected the prices of their farm produce and as indicated in Table 3.17 the findings show that most of the respondents (56.01 percent) reported that the prices of their farm produce were higher or much higher compared with the preceding five years. On the other hand, 38.59 percent of the respondents

reported that the prices of their farm produce became much lower or lower since the emergence of covid-19 pandemic while just 5.39 percent indicated that the prices were the same as in the preceding five years. For the respondents who have not sold any of their products since the covid-19 pandemic, Table 3.18 indicates that over 55 percent of them reported that they were reserving them for family consumption. Further discussion with the various food farmers interviewed show that they were hesitant selling their food products because they do not know when the covid-19 restrictions will end and that they do not want their family to starve. Here again the challenge of storage confronted them as most of them do not have facilities for the storage of perishable food items. However, some of the respondents reported that they did not sell their farm produce because the markets were closed (16.95 percent), prices offered were too low (10.17 percent) and that transportation was not available (8.47 percent). On the challenge of food storage noted earlier, Table 3.19 shows that over 76 percent of the food farmers do not have any storage facilities compared with about 23 percent that stated that they have some form of food storage facilities.

On the impact of the shortage of farm inputs and labour for the price of their farm products, some of the key informant respondents and participants in the focus group discussions stated as follows:

> *"If you can take your harvested produce to the city, then you are bound to sell at a very low price. That was what happened this year. So, the prices of our produce fluctuated."*

> *"Yes. It is called give and take. It is what you give out you calculate to sell. Like maybe you fed a bird for #2,500 and you want to sell #3,500. It became higher because of the increase in the feeds. But we had low sales because people were not have the money to buy at that amount. They will say instead of buying for that amount, they will instead go and buy ice-fish."*

> *"Yes. Buyers were not forthcoming because they were always complaining that there's no money when we first increased our prices. So, we had to reduce our price. The coronavirus really affected us this year. We are just managing."*

> *"COVID-19 led to increase in price of my food product ready for sale because I have to add the cost of transportation to the product. This in turn resulted in low patronage as the buyers complained of the products being too expensive."*

Table 3.17: Percentage distribution of food farmers according how COVID-19 affected the price of their farm produce

Food farmers	Male	Female	Total
Much lower, lowest price in the last 5 years	8.30	8.30	**16.60**
Lower	10.37	11.62	**21.99**
About the same	2.07	3.32	**5.39**
Higher	13.69	21.99	**35.68**
Much higher, highest price in the last 5 years	6.64	13.69	**20.33**
Total	**41.08**	**58.92**	**100.00**

Table 3.18: Percentage distribution of food farmers according why they have not sold any farm produce since Mid-march 2020

Food farmers	Male	Female	Total
Saving it for family consumption	23.73	32.20	**55.93**
Market is closed	6.78	10.17	**16.95**
No buyers in the market	0.00	0.00	**0.00**
Price offered was too low	3.39	6.78	**10.17**
No transportation available	5.08	3.39	**8.47**
Other	1.69	6.78	**8.47**
Total	**40.68**	**59.32**	**100.00**

Table 3.19: Percentage distribution of food farmers according to whether they have food storage facilities

Food farmers	Male	Female	Total
Yes	11.02	12.34	**23.36**
No	29.98	46.66	**76.64**
Total	**41.00**	**59.00**	**100.00**

Some of the key informants expressed their experiences with respect to the sale and storage of their farm products as follows:

"Our products, like plantain, banana, bush meat, and vegetables, are rotting due to a lack of customers. Life is getting more and more difficult"

"Market women from cities and towns no longer come regularly to buy harvested produce. This has led to wasting of some of our crops"

"I used to supplement my farm income by sewing school uniforms, but currently there are no customers, as the schools have been closed"

"The off take of my products has been reduced, since buyers are scared of possible infection. Demand for the honey I produce has decreased"

The covid-19 pandemic has led to government extension officers to no longer conducting their functions owing to travel restrictions. This means that much of the agricultural information flow that is normally given to farmers has been curtailed. In the prevailing environment, farmers had to either adjust to other income-generating activities or wait for the situation to cool down. During the commencement of the covid-19 pandemic in March 2020, the Federal

Government of Nigeria put in place some palliatives to cushion the negative effects of the restrictions that were imposed in the country. The survey tried to explore the degree to which the respondents benefitted from these palliatives. Table 3.20 shows that the vast majority of the respondents (97.00 percent) reported that they did not receive any support whatsoever from government and its agencies. This indicates, as reported in Table 3.20, that only 3 percent of the respondents benefitted from the palliatives put in place by government despite the fact that 48 percent of them are aware that government did provide palliatives to Nigerians negatively affected by covid-19 pandemic as shown in Table 3.21.

Some of the key informants expressed their experiences with respect to the sale and storage of their farm products as follows:

"Our products, like plantain, banana, bush meat, and vegetables, are rotting due to a lack of customers. Life is getting more and more difficult"

"Market women from cities and towns do no longer come regularly to buy harvested produce. This has led to the perishing of some of our crops"

"I used to supplement my farm income by sewing school uniforms, but currently there are no customers, as the schools have been closed"

"The off take of my products has been reduced, since buyers are scared of possible infection. Demand for the honey I produce has decreased"

It was in this context that the survey discussed with the respondents the type of support or assistance which they want from government. Table 3.22 shows that the vast proportions of them want micro credit to boost their food farming activities with women dominating this demand for micro credit. A significant proportion of the respondents (22.32 per cent) want support in the purchase of farm inputs while an insignificant proportion of the respondents want market information.

Table 3.20: Percentage distribution of food farmers according to whether they have received any support from the Federal/State/Local Government, community, individuals or any other body for their farm enterprise

Food farmers	Male	Female	Total
Yes	2.00	1.00	**3.00**
No	39.00	58.00	**97.00**
Total	**41.00**	**59.00**	**100.00**

Table 3.21: Percentage distribution of food farmers according to their awareness of the fact that government provided assistance to those affected by COVID-19

Food farmers	Male	Female	Total
Yes	22.00	26.00	**48.00**
No	19.00	33.00	**52.00**
Total	**41.00**	**59.00**	**100.00**

Table 3.22: Percentage distribution of food farmers according to the kind of support they need from government or any other body for their farm enterprise

Food farmers	Male	Female	Total
Farm inputs (fertilizer and seedlings, etc.)	8.99	13.33	**22.32**
Micro-credit	31.00	43.67	**74.67**
Market information	0.67	1.67	**2.34**
Others	0.34	0.33	**0.67**
Total	**41.00**	**59.00**	**100.00**

On whether the respondents benefitted from government support for farming activities at this period, some of the key informant respondents and participants in the focus group discussions stated as follows:

> *"None. Most of these things, we hear with our ears and it ends at the council there, anybody can quote me. Most of the time, they call me as the community chairman, but when you get there, they start speaking abracadabra. So, I can tell you vividly, that nothing was brought to this community."*

> *"There was a time some people brought 7 bags of rice to the community for people to share. After sharing, most people got about 23 cups of rice. That was the most that came from them."*

> *"To the best of my knowledge, in the community where I live, I don't want to condemn the government; I did not experience any such thing. The only palliative came from a non-governmental organization. I don't think I have seen any government that has sent any items or the other to say we want to use this maybe to make the people happy or to cushion the effect of the pandemic. The face mask you see me wearing here was provided by Jim-Ovia foundation."*

> *"Nothing at all. No support from the Government. Not even a dim was given to assist farmers. Some people were given one cup of beans, others got one cup of rice. Ask me or quote me anywhere, there was no support or whatsoever."*

Chapter 4

Covid-19 and Local Food Marketing Activities

Introduction

Markets can be viewed as the collective devices that allow compromises to be reached, not only on the nature of goods to produce and distribute but also on the value to be given to them. The main function of markets is the exchange of value based on context-specific rules that are shaped by public regulations, cultural customs, civic norms and/or private contracts. In particular, agricultural food markets aggregate demand and supply across space and time throughout the entire food system from input supply to farm production, collection, processing, packaging, transportation, including the consumption of retail food products. Summarizing, agricultural food markets concern the totality of the complex production, transformation and distribution activities making it possible for a crop to be consumed by eaters. Therefore, they perform multiple fundamental functions and play a crucial role in the process of economic development. Nowadays, agricultural food systems and markets are under unprecedented aggregation of various pressures.

Good access to lucrative markets is vital for farmers to be profitable and productive. This is evident in all agricultures that have successfully transformed. Unless they sell profitably, farmers risk acting against their financial interest by being productive, resulting in surpluses, which lead to price falls when there are gluts, as demand for basic food is typically price and income inelastic. Therefore, if governments want to transform their agricultures, they must provide an environment that enables their farmers to be productive and to sell profitably. Governments that have succeeded in providing such a conducive environment over decades have used a variety of ways, acting along the entire value chain from production, through processing, marketing—domestic and foreign, and on to final consumer demand. The challenge for governments is still to find ways of expanding market access for their farmers that are win-win for all parties involved. In Nigeria, measures to expand market access should help smallholders reduce poverty and increase their food security by promoting their productivity growth in a climate-resilient agriculture under climate change, while delivering quality products to consumers at affordable prices.

Besides ill-health and death due to covid-19, one of the most consequential welfare outcomes arising from disrupted production and lost income could be reduced access to food. The possibility of rising hunger and malnutrition during this pandemic threatens primarily a low-income country such as Nigeria. This chapter presents an overview of the key issues affecting food markets during covid-19 and discusses key implications for expenditure policies, which will need to be tailored to country-specific circumstances. It sets out what is known with regard to (1) the food supply at the stage of agricultural production, (2) midstream and downstream components of food supply chains and (3) the demand side, price developments, and food security.

Food marketing patterns during the period of Covid-19

The partial closure of critical food system infrastructure (rural producer markets, wholesale food markets and open-air retail food markets) led to the apparent shutting down of the traditional marketing system in Delta State as in other parts of the Niger Delta region. Partial market closures by government during the commencement of covid-19 pandemic prevented transactions between producers, traders, wholesalers, retailers and consumers. With no place for transactions, supply is reduced, prices increased and livelihoods and incomes suffer, creating a major stress on food security. Insufficient and poor access to dry and cold-chain storage compounded the marketing problems, leading to increased food loss and waste.

The findings of the survey show that respondent food marketers were involved in various food trading types as indicated in Table 4.1 which shows that the vast majority (59.66 percent) of them focus on buying food items from other traders mainly middlemen/women suppliers who visit rural areas to purchase food items in bulk. Table 4.1 further shows that a significant proportion of the respondents buy directly from farmers probably at the farm gate to sell to other traders in which case they can be described as collecting food items from farmers in rural communities. However, as Table 4.1 indicates a significant proportion (25.66 percent) of the respondents were involved in wholesale food trade in which they buy from other traders, especially those who buy food items from rural communities to sell to other traders in urban or semi-urban areas. As usual, women dominate the food marketing system with over 72 percent of the respondents constituting women food traders. Table 4.1 indicates further that women constituting 45 percent of the 59.66 percent of the traders involved in retaining of food items just as they also constitute the larger proportion of traders involved in wholesaling (9.01 percent compared with 4.34 percent for men) and purchasing from farmers to sell to other traders (17.67 percent compared with 7.99 percent for men).

Table 4.1: Percentage distribution of food marketers according to type of food trading activity they are involved in

Food Marketers	Male	Female	Total
Purchase from traders, sell to consumers (retailing)	14.66	45.00	**59.66**
Purchase from traders, sell to traders (wholesaling)	4.34	9.01	**13.35**
Purchase from farmers, sell to traders (collecting)	7.99	17.67	**25.66**
Others	0.33	1.00	**1.33**
Total	**27.32**	**72.68**	**100.00**

Food marketing has engaged a large proportion of the respondents for a long time as Table 4.2 indicates with over 68 percent of them being involved in food marketing for over three years. Furthermore, a significant proportion of the respondents (25.34 percent) had been trading on

food items for between one and three years while just about 6.33 percent had been trading for less than one year. Again more women have been in the food trading business for a longer period compared with their male counterparts. Table 4.2 shows that over 51 percent of the women have been in the food trading business for over three years compared with just 17 percent of men. Similarly, while 16.67 percent of the women were involved in food trading for between one and three years the proportions for males was 8.67 percent.

Table 4.2: Percentage distribution of food marketers according to how long have been in their trading business

Food Marketers	Male	Female	Total
Less than 1 year ago	1.67	4.66	**6.33**
Between 1-3 years ago	8.67	16.67	**25.34**
More than 3 years ago	17.00	51.33	**68.33**
Total	**27.34**	**72.66**	**100.00**

Table 4.3: Percentage distribution of food marketers according to type of food products which they trade on

Food Marketers	Male	Female	Total
Arable crop products (e.g. potato, maize, yam, cassava, rice, plantain, vegetable e.t.c.)	14.12	46.64	**60.76**
Animal products (e.g. goats, sheep, cattle, poultry e.t.c.)	7.55	6.61	**14.16**
Edible oil products	1.80	7.33	**9.13**
Fruit products	0.93	6.11	**7.04**
Fishery/aquatic products (snail, crayfish, prawn, crab)	2.69	6.22	**8.91**
Total	**27.09**	**72.91**	**100.00**

Table 4.4: Percentage distribution of food marketers according to the two most important food products which they traded on

Food Marketers	Male	Female	Total
Arable crop products / Animal products	26.67	60.67	**87.33**
Arable crop products / Edible oil products	20.67	70.00	**90.67**
Arable crop products / Fruit products	21.00	60.67	**81.67**
Arable crop products / Fishery/aquatic products	24.00	62.33	**86.33**
Animal products / Edible oil products	14.67	32.00	**46.67**
Animal products / Fruit products	15.00	22.67	**37.67**
Animal products / Fishery/aquatic products	18.00	24.33	**42.33**
Edible oil products / Fruit products	9.00	32.00	**41.00**
Edible oil products / Fishery/aquatic products	12.00	33.67	**45.67**
Fruit products / Fishery/aquatic products	12.33	24.33	**36.67**

The food marketers were involved in the sale of a variety of food items locally consumed in Nigeria as Table 4.3 indicates. The vast proportion of the respondents (60.76 percent) were involved in the marketing of arable crop products such as potato, maize, yam, cassava, gari, rice, plantain, vegetable, etc. Women, as usual, dominate the marketing of these food items with 46.64 percent of them involved compared with men that constitute 14.12 percent. The marketing of animal products such as goats, sheep, cattle, poultry, etc. constitute 14.16 percent of the traders with women constituting 6.61 percent while men constitute the balance of 7.55 percent which indicates that slightly more men were involved the marketing of animal products compared with women. Table 4.3 further shows that about 9 percent of the respondents were involved in the sale of edible oil products with women constituting 7.33 percent and men just 1.80 percent. The sale of fruit products involved 7.04 percent of the respondents with virtually of them being women. Finally, the sale of fishery/aquatic products such as snail, crayfish, prawn and crab involved 8.91 percent of the respondents with 6.22 percent being women and 2.69 percent men.

A further disaggregation of the respondents was carried out according to the food items they were involved in marketing by asking them to identify the two most important food items they trade on. Table 4.4 indicates that traders involved in the sale of arable crop products and edible

oil products has the highest proportion of traders with 90.67 percent with women constituting 70 percent while men constitute 20.67 percent. Second, respondents involved in the sale of arable crop products and animal products constitute 87.33 percent with women comprising 60.67 percent and men 26.67 percent. This reflects the fact that men play a greater role in the sale of animal products as noted earlier. Third, respondents trading in arable crop products and fishery/aquatic products constitute 86.33 percent with women comprising 62.33 percent while men constitute 24 percent. Fourth, respondents involved in the sale of arable crop products and fruits constitute 81.67 percent with women constituting 60.67 percent and 21 percent. Other combinations largely comprise combining the sale of arable crop products with some other food items as indicated in Table 4.4. Overall, the findings show that the sale of arable crop products dominates the food items sold by the various respondents.

The emergence of covid-19 pandemic and the associated precautions put in place by governments obviously had some effects on the activities of food marketers in Delta State. Government precautionary measures have exempted the movement of people and goods related to agriculture and food products from COVID-19-imposed controls. Traders, transporters, producers and businesses in Delta State report, however, that frequent road closures, police-enforced checkpoints and government-imposed "lockdowns" on the free movement of people have limited their ability to transport agricultural and food products between rural and urban areas. In some cases, obtaining the needed permits was proving difficult because offices were closed or have restricted hours/personnel to process requests. These restrictions reverberate through the food production system affecting food supplies in urban areas and to transport food from rural communities to urban areas.

Table 4.5 shows the assessment of respondents with respect to the number of customers that patronised them before and after March 2020. The responses as shown in Table 4.5 indicates that the vast majority of the respondents (80.01 percent) reported that the number of customers patronising them declined since March 2020 with women again more negatively affected with 58 percent of them reporting lower patronage compared with men that had only 22.01 percent. Table 4.5 further shows that just 9.67 percent of the food marketers reported that the number of their customers increased since covid-19 pandemic precautions were put in place by governments in Nigeria. Finally, about 9 percent of the food marketers reported that they had the same level of customers before and after covid-19 precautions were introduced in March, 2020.

Table 4.5: Percentage distribution of food marketers according to their comparison of the number of customers that patronize their food products before and since Mid-March 2020

Food Marketers	Male	Female	Total
Higher	2.33	7.34	**9.67**
Lower	22.01	58.00	**80.01**
Same level	2.66	6.66	**9.32**
Don't know	0.33	0.67	**1.00**
Total	**27.33**	**72.67**	**100.00**

Another indicator used to assess the impact of covid-19 on the performance of food marketers is their assessment of the patterns of change in the volume of sales. Although government restrictions on movement tend to exempt the transport of goods but there were still restrictions

on the movement of farmers living in localities close to urban areas that often come (daily or weekly) to the urban markets to sell part of their crops and return to the village with manufactured goods. These restrictions on rural-urban travel and the closure of rural markets thus affect traditional mechanisms of destocking of local agricultural products by farmers, particularly in collection markets. This situation also affects the marketing of livestock by pastoralists and agro-pastoralists. Table 4.6 indicates that the vast majority of the food marketers (83.34 percent) reported that their sales declined since the covid-19 precautions were introduced by government. Indeed Table 4.6 indicates that over 44 percent of the food marketers had their sales decreased by more than 50 per cent. Table 4.6 further indicates that just 11 percent of the respondents reported that their sales increased after the introduction of covid-19 precautions.

Table 4.6: Percentage distribution of food marketers according to the description of their sales since Mid-March 2020

Food Marketers	Male	Female	Total
Increased by more than 50%	1.67	3.99	**5.66**
Increased by 0-50%	1.34	4.00	**5.34**
No change	1.33	4.33	**5.66**
Decreased by more than 50%	13.67	30.67	**44.34**
Decreased by 0-50%	9.34	29.66	**39.00**
Total	**27.35**	**72.65**	**100.00**

The survey examined the effects of covid-19 on the sources of supply of local food items for the food marketers before and after the introduction of precautionary measures. Table 4.7 which shows the situation before covid-19 indicates that most of the food marketers (40.66 percent) got supplies of their food products for sale from farmers within the local government area in which they were resident in Delta State. Similarly, 22 percent of the respondents got supplies of their food for sale from farmers in other local government areas within Delta State and other parts of Nigeria. Table 4.7 indicates that about 24 percent of the food marketers got supplies of food for sale from other traders within the local government area in which they were resident while about 14 percent of them got supplies of food for sale from traders in other local government areas within Delta State and other parts of Nigeria.

Table 4.8 shows the situation after the introduction of covid-19 precautions and it indicates that there were no major changes in the sources of supply of food to the food marketers which suggests that covid19 has not brought any remarkable changes to the sources of food supply to the marketers. It appears, as noted earlier, that the effects of covid-19 was mainly in the volume of sales rather than the sources of supplies. The restricted accessibility of markets, supermarkets, or retail shops, the increased queuing and distancing measures create barriers for the population to accessing food and for guaranteeing variable diets. It may discourage regular shopping of fresh foods and make purchasing a diversity of foods less appealing and convenient. It may also increase the desirability of foods that can be stored longer and is

processed. This can affect diets. It may therefore be important to intensify nutrition behaviour change communication to reemphasize the importance of a diverse diet for health, in addition to the necessary behaviour change messages on social distancing and good hygiene.

Table 4.7: Percentage distribution of food marketers according to their most important source of the selected food products before Mid-March 2020

Food Marketers	Male	Female	Total
Farmers within the Local Government Area	9.66	31.00	**40.66**
Farmers in other Local Government Area within Delta State and other parts of Nigeria	6.33	15.67	**22.00**
Traders within the Local Government Area	4.67	19.00	**23.67**
Traders in other Local Government Areas within Delta State and other parts of Nigeria	6.67	7.00	**13.67**
Total	**27.33**	**72.67**	**100.00**

Some of the key informant respondents and participants in the focus group discussions stated as follows:

> *"We purchase them from the local government since the COVID-19. Before the COVID-19 era, I usually buy my food products in other LGAs."….(F)/EE"*
>
> *"I get my products from Ekpan Warri, which is outside the LGA."*
>
> *"From outside the LGA which Sapele but inside Delta state"*
>
> *"At Ughelli, away from the LGA"*
>
> *"I buy from this local community. I also buy from Orhoakpor in another L.G.A"*

Table 4.8: Percentage distribution of food marketers according to their current most important source of the selected food products

Food Marketers	Male	Female	Total
Farmers within the Local Government Area	10.00	28.67	**38.67**
Farmers in other Local Government Area within Delta State and other parts of Nigeria	6.34	18.33	**24.67**
Traders within the Local Government Area	5.34	17.33	**22.67**
Traders in other Local Government Areas within Delta State and other parts of Nigeria	5.67	8.32	**13.99**
Total	**27.35**	**72.65**	**100.00**

Markets largely remain open as government policies have declared agriculture an essential service. Consequently, supply disruptions have been isolated. However, logistics were under pressure and costs were being driven up by travel restrictions, state border checks, curfews, delays caused by staff shortages, and a general reduction in volume. The stock levels of food products being sold by the marketers were in some ways affected by covid-19 as indicated in Table 4.9 in which over 76 percent of the food marketers reported that their stock was much lower due to the impact of the various precautionary measures that have reduced the mobility of the food marketers to replenish their supplies. Table 4.9 further shows that just about 10 percent of the respondents reported that their stock is much higher while another 9.34 percent indicated that there were no changes in their stock. These patterns of increase in stocks or lack of changes may reflect the fact that sales were poor and hence the supplies remain in stock.

Some of the key informant respondents and participants in the focus group discussions stated as follows with respect to the transportation of food items for sale:

> *"Transport is another thing affecting us as retailers. They talk about social distancing. Instead of you paying the normal transport fare, you now have to pay that of another person because of social distancing."*
> *"It has affected it because most of the time you do not even get vehicle to transport from one place to another and when you eventually get one, the transport fare is high."*

> *"That is the real wahala now. After you buy those food products at expensive prices, you have to use expensive transport fare to bring the goods. Before, the transport we usually use to bring those loads here was $5,000 but now it is $10,000. Transport fare is too much."*

This observation is somehow confirmed by the findings reported in Table 4.10 which shows that the three most important constraints preventing the food marketers from having a much higher stock since March, 2020 indicates that 65.10 percent of the food marketers identified the lack of means of transport due to restrictions on movement was responsible for the low stock levels. Table 4.10 shows that 47.90 percent of women were so affected compared with just 17.67 for men. Similarly, 54.06 percent of the respondents reported that low or irregular quantity of produce (supply) including trade restrictions contributed to their stock levels due to covid-19 precautions introduced by government. Furthermore, 50.47 percent of the food marketers stated that lack of demand contributed to their stocking food items because they do not want them to get spoilt and wasted while 22.09 percent reported that lack of storage facilities negatively affected their ability to stock food items for sale.

Table 4.9: Percentage distribution of food marketers according to their indication of their stock levels (of the selected food products) compared to before the period Mid-March to August 2020

Food Marketers	Male	Female	Total
No change	3.34	6.00	**9.34**
My stock level is much higher	4.00	6.33	**10.33**
My stock level is much lower	17.67	58.67	**76.34**
I don't know	2.33	1.66	**3.99**
Total	**27.34**	**72.66**	**100.00**

Table 4.10: Percentage distribution of food marketers according to the three most important constraints preventing them from having a much higher stock since Mid-March 2020

Food Marketers	Male	Female	Total
Low or irregular quantity of produce (supply) including trade restrictions	15.46	38.60	**54.06**
Lack of means of transport due to restrictions on movement	17.20	47.90	**65.10**
Too much insecurity	3.37	8.49	**11.86**
Lack of storage	4.82	17.27	**22.09**
Lack of demand	13.09	37.38	**50.47**
Inability to access the bank	5.04	12.50	**17.54**

With the negative impact of covid-19 on the ability of households to generate adequate income to meet their obligations, an attempt was made to examine whether food markers were

magnanimous in granting credit to their customers. Table 4.11 shows that the vast majority of the respondents (80.00 percent) reported that they provided credit to their customers during the period after March 2020 with 60 percent of them being females while 20 percent were males. It is obvious that women are more sympathetic to their customers during this difficult period.

Some quotations from key informant interviews and focus group discussions with food marketers summarises some of the challenges which they faced during the covid-19 pandemic period as follows:

> *One trader said "Because of the lockdown, people are not coming to buy and the street is so quiet. And you don't see anyone on the road. I was selling at the market for three days but no one is coming," says Sandra, who sells produce at a market in Agbor urban centre.*
>
> *Another one said "Today I decided that this week I wouldn't go in at all and I may have to throw out the tomatoes, peppers, okra and eggs she sells, as all will spoil before this coming week".*
>
> *Finally, another woman trader said "I'm worried about the money... I bought the things before. If I knew it was going to happen, I would have waited and kept the money," another trader said, complaining that she would not have stocked up on perishable goods otherwise.*
>
> The situation reported by these traders is mirrored throughout Delta State for informal food traders, where people have not been given a lot of time to prepare. Those who had already bought stock have lost money.

Table 4.11: Percentage distribution of food marketers according to whether they provide credit to some of their customers

Food Marketers	Male	Female	Total
Yes	20.00	60.00	**80.00**
No	7.34	12.66	**20.00**
Total	**27.34**	**72.66**	**100.00**

Some quotations from key informant interviews and focus group discussions with food marketers summarises some of their experiences with respect to the price of the food items during the covid-19 pandemic period as follows:

> *"It has decreased. People no longer travel to come to the local market to buy things. So, the quantities of goods I sell have reduced and also prices of food items have also increased. The last time I went to the market, the money I went to the market to buy 5 sack of rice, I discovered that I could not even but up to 3 sack of rice meaning prices of goods even from the north have gone up."*
>
> *"The sales of food stuffs have reduced. This is as a result of the fact that many people's incomes have decrease and that is affecting sales. For the price, presently, the prices of food have increased because of increased in transportation."*

"Let me tell you the truth, many things went up this year. Rice we used to buy #16,000 in 2019 this year, we buy it now for #25,000. Last week here, I went to Onitsha and bought the rice for #35,000. So, this coronavirus brought many things including hunger. So, because things are now very expensive, I buy fewer quantities of food products. Prices of have also increased for those food products."

"That time coronavirus has not come, we were selling very well but now since coronavirus came, we don't sell again. Our sales have reduced. Prices of food items have also gone up. Yam that we sell #300 is now #600"

"The sales have reduced significantly. There is no profit. We are only still trading because we cannot sit at home doing nothing. There is no money so the money meant for trade is what we are feeding on presently. In terms of quantity, I purchase fewer products now and in terms of price, the price is much higher."

Table 4.12: Percentage distribution of food marketers according to whether there have been any changes in the number of people requesting credit compared to before Mid-March 2020

Food Marketers	Male	Female	Total
Yes, less people	4.16	13.75	**17.91**
Yes, more people	20.00	56.66	**76.66**
No, same number	0.84	4.59	**5.43**
Total	**25.00**	**75.00**	**100.00**

Another indicator of the pressure which food customers face during the covid-19 period relates to whether they request for credit from food marketers. As shown in Table 4.12 the food marketers reported that with the covid-19 pandemic, there have been remarkable changes in the number of their customers requesting for credit to buy food items compared with the situation before covid-19. Table 4.12 shows that over 76 percent of the food marketers reported that more of their customers were asking for credit after the introduction of covid-19 precautions while 17.91 percent indicated that less of their customers were asking for credit. This shows that covid-19 had negative effects on the resources available to the people to buy their food requirements.

In situations where the covid-19 pandemic affected food production and movement of food items for sale, it was obvious that prices of food items will increase. The food marketers (80.57 percent) reported, as indicated in Table 4.13, that the purchase price of their commodity increased since covid-19 pandemic started. The proportion of the respondents that reported that their commodity price did not increase was only about 18 percent. The food marketers also needed credit in the covid-19 period to sustain their trade but this was not forthcoming as over 88 percent of the food marketers reported that they did not receive any credit facility from any government agent. Table 4.15 indicates that the respondents were almost evenly divided with respect to whether women and men have access to credit to boost their food trade. Table 4.15

shows that while 58.01 percent of the respondents indicated that women have access to credit to promote their food marketing, 41.66 percent of them reported that women do not have such opportunity as men do.

Table 4.13: Percentage distribution of food marketers according to whether the purchase price of their commodity increased in their area since COVID-19

Food Marketers	Male	Female	Total
Yes	21.24	59.33	**80.57**
No	5.10	12.99	**18.09**
No response	1.00	0.34	**1.34**
Total	**27.34**	**72.66**	**100.00**

Table 4.14: Percentage distribution of food marketers according to whether they have received any credit from any agent since Mid-march 2020

Food Marketers	Male	Female	Total
Yes	4.00	7.33	**11.33**
No	23.33	65.34	**88.67**
Total	**27.33**	**72.67**	**100.00**

Table 4.15: Percentage distribution of food marketers according to whether women have access to credit facility as much as men do in their area

Food Marketers	Male	Female	Total
Yes	18.34	39.67	**58.01**
No	8.66	33.00	**41.66**
No response	0.33	0.00	**0.33**
Total	**27.33**	**72.67**	**100.00**

Chapter 5

Covid-19 and Household Members' Vulnerabilities

Introduction

While a lot of attention has been given to the consequences of covid-19 for societies as a whole, the debate on vulnerable groups is much quieter. Understanding the extent to which different groups are at risk, and how certain policies and programme can protect and support them, is crucial for promoting effective and equitable interventions and preventing them from being left further behind as a result of the covid-19 pandemic. Vulnerable groups include those living in poverty, informality, conflict and fragility, often in overcrowded settings with limited access to sanitation and healthcare and who do not benefit from subsidised wages or unemployment benefits. It also includes young people, who may struggle even harder to find decent work, women, who lack decision-making power and are disproportionately represented in healthcare, childcare and vulnerable work, and other marginalised groups who may not be able to access the resources they need for their wellbeing.

Economic shocks have been highly prevalent since the outbreak of COVID-19 in Nigeria and the precautionary measure that government has put in place. The most commonly observed shocks were increases in the price of major food items as well as increases in the price of farming/business inputs. It was reported in the previous chapters that households also experienced serious disruptions to economic activity, particularly non-farm business closure and disruption of farming activities. While several of the agricultural activity shocks were common to both urban and rural areas, they were more pronounced for rural respondents. There were severe disruptions of farming, livestock, and fishing activities, as well as increases in the price of inputs and a fall in the prices of farming/business outputs. This chapter examines the impact of covid-19 on household members in Delta State.

Household access to markets

A major challenge to households during the period of covid-19 pandemic has been their ability to have access to markets for the purchase of essential items particularly food. COVID-19 mitigation measures could also disrupt food distribution. Market closure, limited transport options and restrictions on internal and cross-borders movement limit markets access. Food markets are a second example. Most retail outlets are allowed to continue trading during the lockdown in Nigeria, and consumers are allowed to leave their homes to buy essential food and groceries. However, restrictions on the size of crowds that can congregate have resulted in the closure of large, informal markets where the poor – particularly the urban poor – purchase a large part of their food. This becomes especially problematic for foods with limited shelf life – think fruit, vegetables, and animal source foods– with the result that these restrictions adversely affected both the quantity and quality of foods available for consumption.

Table 5.1 shows that the vast majority of the respondents (91.25 percent) indicated that there were times that they could not access the markets to purchase what they needed in their households. Thus just 8.75 percent of the respondents reported that they had access to markets all the time without any disturbance. For the households that could not access markets all the time they gave reasons which constrained them, as reported in Table 5.2, which shows that over 40 percent of the respondents from accessing markets because they were closed.

Furthermore, over 35 percent of the respondents reported that movement restricts such as curfew prevented them from reaching markets to purchase essential items. Finally, about 18 percent pointed out that they were afraid of contacting the virus outside.

Table 5.1: Percentage distribution of households according to whether there been any time that they could not access the markets/stores since Mid-March 2020

Households	Percentage
Yes	91.25
No	8.75
Total	**100**

Table 5.2: Percentage distribution of households according to the main reasons why they could not access the markets/stores

Households	Percentage
Markets/store were closed	40.86
Movement restrictions such as curfew	35.13
Concerned about leaving the house due to outbreak	18.47
Others	0.77
Not applicable	4.77
Total	**100**

The Covid-19 pandemic had considerable impact on the supply of fresh food items due to the restrictions in the movement of food items between rural communities and semi-urban and urban areas. The inability to perform normal farming and agricultural processes has led to crop losses and food shortages which affect different communities. Table 5.3 shows that most the respondents (72.50 percent) reported that fresh food items were partially/sometimes available during the period to their households. Table 5.3 further shows that just 18.75 percent of the respondents reported that fresh food items were always available while another 8.25 percent indicated that fresh food items were not available. In situations where some households were not able to easily access key food items such as eggs, vegetable, meat, fish etc. because of covid-19 is challenging and obviously had effects on the welfare of many household members.

On difficulties in buying food due to most food markets being closed some of the key informants and focus group discussants stated as follows:

> *"Markets were closed for a long time. That also affected our feeding."*
>
> *"Yes. Because some of the things we usually buy were not coming forth and markets were closed. Later they now set up a place for market at certain days."*
>
> *"Not really, we were buying food from small shops around."*

"Yes, it was a big problem. They fixed days (Mondays, Wednesdays and Saturdays). If I don't have money on Monday for market, meaning I will stay till Wednesday and if I don't have on Wednesday meaning I will stay till Saturday and if peradventure I do not have on Saturday, it means I will go hungry for the full week and what I was not supposed to eat, I will have to eat. That is what is really affecting me since I don't eat garri since I'm diabetic. We don't even eat to satisfaction, maybe where I usually cook 3 cups before, I had to cut it to 1and 1/2 cups. I make a pot of soup for #1,000 before, as a result of the COVID19, I will just find where I can see vegetable, I will pluck it, put crayfish and eat it. The COVID-19 really affected us severely."

Table 5.3: Percentage distribution of households according to whether fresh food items (eggs, vegetables, meat, fish, etc.) are available all the time in the markets/stores since Mid-March 2020

Households	Percentage
Always available	18.75
Partially/sometimes available	72.50
Not available	8.25
No response	0.25
Total	**100**

Similarly, the availability of basic food items such as rice, bread, garri yam, etc. was equally affected by covid-19 pandemic precautions introduced by government. A major impediment to food security is limited distribution options. The COVID-19 pandemic has interrupted all aspects of the food supply chain, including the logistics related to food handling and distribution. Even when food supplies are available, there are barriers for it reaching consumers, most especially due to movement restrictions imposed to reduce the spread of the virus. Table 5.4 show that 71.50 percent of the respondents reported that basic food items were partially or sometimes available while 23 percent indicated that basic food items were always. Again the findings reflect the fact that many households had problems assessing basic food items which many household members depend on for feeding.

Some major statements by key informant interviews and focus group discussions with food marketers summarises some of their experiences with respect to the price of the food items during the covid-19 pandemic period as follows:

"Yes. It was like that. There are times if the government task force sees you aside, you are in trouble."

"It was a problem. Sometimes you will want to go to market and the police will start pursuing you. At that time, it was very difficult to even get motor cycle to take you to the market"

"Sometimes you go to the market and you won't be able to buy anything because thing were very costly. The transportation alone was another

issue, it was very high. It really affected us who were widows and my market was not flowing as before."

Table 5.4: Percentage distribution of households according to whether basic food items (rice, bread, garri etc.) are available all the time in the markets/stores since Mid-March 2020

Households	Percentage
Always available	23.00
Partially/sometimes available	71.50
Not available	5.25
No response	0.25
Total	**100**

As the COVID-19 pandemic spreads across Nigeria, many people are heeding the advice of health experts to wash their hands. But for many people in rural communities in Nigeria who do not have access to detergent and soap, this small action to prevent infection remains out of reach. This is due to the fact during the first few weeks of the pandemic available hygiene supplies were bought making it difficult for some households to have access to these basic hygiene materials. Table 5.5 shows that while 53.50 percent of the respondents indicated that their households always got hygiene materials to buy some 42 percent reported that these materials were partially or only sometimes available for them to buy.

Table 5.5: Percentage distribution of households according to whether hygiene items (e.g. soap, detergent etc.) are available all the time in the markets/stores since Mid-March 2020

Households	Percentage
Always available	53.50
Partially/sometimes available	42.00
Not available	3.75
No response	0.75
Total	**100**

Essential medicines are those drugs that satisfy the priority healthcare needs of the population. As a result of the surge in the pandemic, which led to the inevitable lockdown of the Nigerian economy, there has been a noticeable decrease in production and exportation of raw materials as well as finished products (drugs) across different countries. These greatly affected the ease of access to these medicines by the consumers who need them either for treating acute ailments or for the management of chronic diseases. Nigeria is in its early stages of pharmaceutical development; thus, they rely on importation of drugs, raw materials, and equipment from other countries, notably India and China. Nigeria is highly dependent on other countries for its

medicinal needs. About 70.0 percent of the medicines used in Nigeria are imported from China and India. In Nigeria, the lockdown which was accompanied with the closure of borders and travel ban across states led to a significant drop in the quantity of essential medicines in the health facilities, making it difficult for consumers to get the medicines they need. The COVID-19 pandemic also caused an increase in the prices of medicines, hand sanitizers, face masks, personal protective equipment, and other medical equipment used for providing health care. Table 5.6 indicates 47.75 percent of the respondents reported that essential medicine/drugs are not available in clinics and pharmacies within their reach all the time since covid-19 pandemic while 34.75 per indicated that these essential medicines/drugs were partially or sometimes available.

Table 5.6: Percentage distribution of households according to whether essential medicines/drugs available in clinics and pharmacies within their reach all the time since Mid-March 2020

Households	Percentage
Always available	10.00
Partially/sometimes available	34.75
Not available	47.75
No response	7.50
Total	**100**

The combination of reduced supply resulting from the restrictive measures taken by Governments to combat Covid-19 and panic buying that reduced the availability of certain food (and sometimes non-food products such as hydro-alcoholic gels, toilet paper) has resulted in price increases in some countries and in specific markets. Staple food price trends were mixed during the post-COVID-19 period through May in the region on a month-on-month basis. Two contrasting effects were observed. The measures reduced business activities and increased unemployment, resulting in reduced demand. At the same time, transport delays including screening of truck drivers at borders adversely affected supplies. The net effect was a slight elevation of prices moderated by reduced demand and purchasing power. A number of factors that have had a dramatic effect on the ability of farmers to maintain agricultural output as discussed earlier in this report have led to the shortage of food supply. Other factors include the shutdown of markets and slow transportation networks in Nigeria have resulted in wastage and inadequate food supply. Likewise, the border closure limited food imports, further shrinking the supply chain. These developments have led to increases in price of food items which obviously impacted on household ability to purchase the food they wanted. This observation is confirmed by the fact that the consumer price index for food has increased all through the pandemic period. It rose from 14.9 percent in February 2020 to 15.18 percent in June 2020, showing an increase of about 0.28 percent within only four months. It rose sharply to 17 percent by September 2020. This is a considerable rise from 13.39 percent in July 2019 and 14.09 percent in October 2019. Table 5.7 shows that over 94 percent of the respondents reported that there have been increases in food prices since March 2020. Thus households in the study area have experienced dramatic increase in prices of food constituting a major challenge to their standard of living.

Some major statements by key informant interviews and focus group discussions with household members summarise their experiences with respect to the price of the food items during the covid-19 pandemic period as follows:

> *"Yes. What you use to buy at #500 now rose up to #1,000. Thing became very high, not only food"*
>
> *"Prices of food items are on the high side now. I am not able to buy the quantities of food I normally buy because food price have gone up."*
>
> *"Prices were high. Before we were buying one cup of rice for #90 but now it is now #150."*
>
> *"I usually buy 1 basket before, now it is half that we buy because of the high price and you have five (5) people you feed at home, so how would you now make it. You have to now divide the Eba into small manageable sizes for the children to eat and then use water to fill the remaining spaces in our stomach."*
>
> *"Yes. It dropped. So, for this period we now minimize the amount of things we buy from the market because our household income has decreased."*
>
> *"It affected my husband. My husband is a bike-man, and since there were restriction in movement and lockdown, my husband couldn't work and that affected our feeding."*
>
> *"Yes. Because where I work, there was no payment of salaries, so it was difficult to buy the amount of food I and my household consume. It was really been difficult for my household since the COVID-19 came up."*
>
> *"Yes, it affected me very well. I couldn't see money to continue my poultry farm, I had to now divert to baking. But baking things became very high. Eggs that we usually buy for #700 moved from #1,000 to #1,200. The flour we normally for #12,000 is now #15,800. As a result of that now, customer have reduced because prices of the finished products have increased. That is why I am not able to continue again."*

Table 5.7: Percentage distribution of households according to whether there were any changes in the costs of food items since Mid-March 2020

Households	Percentage
Food prices have increased	94.50
Food prices have decreased	3.00
No changes	1.50
No response	1.00
Total	**100**

The outbreak of covid-19 has already caused an array of changes in shopping behaviour among households in the study area. Table 5.8 confirms this observation as 92 percent of the respondents reported that the covid-19 pandemic and the measures introduced by government

have led to changes in their shopping behaviour compared with the situation before the pandemic. Table 5.9 outlines some of the major behavioural shopping changes of the respondents with 85.25 percent reporting that they were able to buy smaller quantities than usual. This phenomenon is a reflection of the declining resources available to the households.

Table 5.8: Percentage distribution of households according to whether there been any change in their shopping behaviour compared with the periods before Mid-March, 2020

Households	Percentage
Yes	92.00
No	8.00
Total	**100**

Table 5.9: Percentage distribution of households according to how they changed their shopping behaviour

Households	Percentage
Buying larger quantities than usual	6.50
Buying smaller quantities than usual	85.25
No Change	2.25
Not applicable	6.00
Total	**100**

Households and Livelihoods

The livelihoods of vulnerable rural households in fragile environments such as Niger Delta region have been strongly affected by the unprecedented circumstances of the COVID-19 pandemic. As traditional resilience mechanisms falter, we need to learn from them and develop new interventions to build resilience now and in the future. Vulnerable households in Niger Delta are confronting worsening economic conditions and a breakdown of the traditional resilience mechanisms that they rely on. In Niger Delta region, as in most other parts of Nigeria, more than 80 percent of workers find their livelihoods in the informal sector. Moreover, informal workers are typically poor and cannot stockpile food or cash for a long lockdown. Strict containment measures directly jeopardize their income, their livelihoods, and their lives.

Table 5.10 explores from the respondents the extent to which the covid-19 pandemic and the associated government containment measures have affected their ability to carry out their livelihood activities. Table 5.10 shows that while 94 percent of the respondents reported that the covid-19 pandemic affected their ability to carry out their livelihood activities just 6 percent reported that the reverse is the case. Table 5.11 provided further details regarding the various ways in which covid-19 affected their livelihood activities and it indicates that 42.20 percent of the respondents reported that movement restrictions was the major factor that affected the execution of their livelihood activities. Furthermore, Table 5.11 indicates that 30.33 percent of

the respondents reported that reduced demand for the goods and services they provide was the major factor that negatively affected the execution of their activities while 20.92 percent of them pointed out that their concern about leaving the house so as not to contact the virus was a major factor.

Table 5.10: Percentage distribution of households according to whether their ability to carry out their livelihoods activities has been affected since Mid-March 2020

Households	Percentage
Yes	94.00
No	6.00
Total	**100**

Table 5.11: Percentage distribution of households according to the main reasons for disruptions to their livelihood activities

Households	Percentage
Reduced demand for goods/services	30.33
Movement restrictions (e.g. curfew)	42.20
Concerned about leaving the house due to outbreak	20.92
Not applicable	4.96
Others	1.61
Total	**100**

Table 5.12: Percentage distribution of households according to whether household income increased or decreased since Mid-March 2020

Households	Percentage
Increased	16.50
Decreased	73.25
No change	8.75
No response	1.50
Total	**100**

During the survey, respondents were asked to assess the degree to which the covid-19 pandemic impacted on their livelihood. Table 5.13 indicates that 71 percent of the respondents reported that the covid-19 pandemic had severe impact on their livelihood while 19.75 percent pointed

out that covid-19 had only a moderate impact on their livelihood. Table 5.13 show that just 6.50 percent of the respondents indicated that the covid-19 pandemic had no impact on their livelihood. The findings confirm the observations made in various parts of this report that covid-19 did have negative impact on households and their means of livelihood.

Table 5.13: Percentage distribution of households according to whether COVID-19 impacted on their livelihood

Households	Percentage
Severe impact	71.00
Moderate impact	19.75
No impact	6.50
No response	2.75
Total	**100**

Although the impact of covid-19 on food production has been examine earlier in Chapter 3 of this report, it is essential to examine the impact of farming on various households in the study area as most of them are engaged one form of primary production or the other for household consumption or sale. Agricultural workers in Nigeria experience the highest incidence of working poverty. Over 70 percent of workers engaged in the sector are in extreme poverty. Despite playing an important role in the national economy, many agricultural workers and their families suffer from poverty and food insecurity. While agric-food sector jobs have been designated as essential in the context of the COVID-19 crisis in Nigeria, the measures adopted to slow down the pandemic may place further strain on the capacity of the sector to continue meeting demand, providing incomes and livelihoods, and ensuring safety and health for the millions of agricultural workers and producers.

Table 5.14 shows that respondents were asked during the survey whether they were engaged in arable farming and to what extent. Table 5.14 shows that over 43 percent of the respondents reported that their farming activities are both for sale and consumption by members of their household while 31 percent were engaged in farming mainly for household consumption. With respect to livestock rearing, Table 5.15 shows that less than half of the respondents were involved in any form of livestock rearing. However, 30.50 percent were involved in livestock rearing for sale and consumption while 15.75 percent were involved in livestock rearing solely for consumption. Finally, as far as fishing is concerned, Table 5.16 shows that only 34.75 percent of the respondents were involved in any form of fishing while over 65.25 percent had nothing to do with fishing of any type. The main observation which can be made from the findings is that even though most the respondents are focusing on their major means of livelihood outside agriculture, they are none the less affected by covid-19 pandemic as it impacts on agriculture in their locality.

Table 5.14: Percentage distribution of households according to whether the household is currently engaged in arable crop farming

Households	Percentage
Yes, for consumption	31.00
Yes, for sale	3.00
Yes, for both sale and consumption	43.25
No	22.75
Total	**100**

Table 5.15: Percentage distribution of households according to whether the household is currently engaged in livestock rearing

Households	Percentage
Yes, for consumption	15.75
Yes, for sale	3.00
Yes, for both sale and consumption	30.50
No	50.75
Total	**100**

Table 5.16: Percentage distribution of households according to whether the household is currently engaged in fishing coastal activities

Households	Percentage
Yes, for consumption	13.00
Yes, for sale	2.25
Yes, for both sale and consumption	19.50
No	65.25
Total	**100**

Access to Key Basic Services (education)

The Covid-19 pandemic and the containment measures introduced by government had considerable impact on the access of households to key basic social and economic services. Some of these services such as health care and credit for economic production were examined earlier in this report. The focus of this section is mainly on education which most households regarded as a key challenge to their welfare and that of their children. The education sector plays a huge role in ensuring not only childhood learning and skill development, but also health,

safety and nutrition, particularly of poorer children or those in situations of violence or conflict. Governments in Nigeria closed down educational institutions early in March 2020. School closure prompted by the pandemic is reducing children's opportunity to learn.

With very little warning, the whole approach to education through classroom teaching became unviable, with little planned to replace it. This problem faced governments worldwide but has been particularly severe in most African countries including Nigeria where there is a wide disparity in provision for the 'elite' and for less advantaged people, mostly in rural areas (Amorighoye, 2020). While educational programmes on television and radio were quickly launched, they were only accessible to those with access to a television or a radio set. Similarly, online learning was only accessible to those with internet access. At both the primary and secondary school levels, priority was often accorded to continuing with examination classes, i.e. those classes taking the primary and secondary leaving certificates. But, for the majority, neither students nor teachers had any prior experience in teaching and learning outside the classroom.

The crisis is exacerbating pre-existing education disparities by reducing the opportunities for many of the most vulnerable children, youth, and adults – those living in poor or rural areas, girls, refugees, persons with disabilities and forcibly displaced persons – to continue their learning. Learning losses also threaten to extend beyond this generation and erase decades of progress, not least in support of girls and young women's educational access and retention. Similarly, the education disruption has had, and will continue to have, substantial effects beyond education. Closures of educational institutions hamper the provision of essential services to children and communities, including access to nutritious food, affect the ability of many parents to work, and increase risks of violence against women and girls. These issues were explored with the respondents during the survey.

Table 5.17 shows that the vast proportion of the respondents (82.75 percent) had children aged between 5 and 18 years old which indicates that these children are of primary and secondary school age. This suggests that most of the households were obviously affected by the closure of schools as noted earlier. Table 5.18 further explored whether the surveyed households had any of their children in primary or secondary schools before schools were closed down in March 2020.

As indicated in Table 5.18, 80.50 percent of the respondents reported that they had children in primary or secondary schools during the period schools were closed down by government. Of the respondents that had children in primary and secondary school Table 5.19 shows that 44.50 percent of them reported that their children have been engaged in any education or learning activities since Mid-March 2020 while 37.25 percent indicated that their children have not been in school. For those children that were engaged in some form of learning, Table 5.20 shows that they were engaged in a series of largely informal education or training including studying or learning on their own (21.74 percent), taught by parent or other household members (15.03 percent) and session/meetings with lesson teacher (15.0 percent). It is obvious that these forms of engaging the children in education were temporary and not sustainable in terms of advancing the learning programmes of the children. It can therefore be concluded that basically covid-19 has not allowed the children of the respondents to make progress in their education since March, 2020.

Table 5.17: Percentage distribution of households according to whether the households have children aged between 5 and 18 years' old

Households	Percentage
Yes	82.75
No	17.25
Total	**100**

Table 5.18: Percentage distribution of households according to whether any of the children attending primary or secondary school before schools were closed due to covid-19

Households	Percentage
Yes	80.50
No	4.00
Not applicable	15.50
Total	**100**

Table 5.19: Percentage distribution of households according to whether any of their children have been engaged in any education or learning activities since Mid-March 2020

Households	Percentage
Yes	44.50
No	37.25
Not applicable	18.25
Total	**100**

Table 5.20: Percentage distribution of households according to types of education or learning Activities their children have been engaged since Mid-March 2020

Households	Percentage
Completed assignments provided by the teacher	4.04
Used mobile learning apps	6.04
Studying learning on their own	21.74
Taught by parent or other household members	15.03
Session/meetings with lesson teacher	15.00
Not applicable	38.16
Total	**100**

Families across the country are adapting to the evolving changes in daily life caused by the COVID-19 pandemic. Most schools, places of public gathering, and nonessential businesses are closed, and parents and other caregivers are faced with helping their families adjust to the new normal. This includes trying to keep children occupied, feeling safe, and attempting to keep up with schoolwork as best as possible. None of this is easy, but it helps to stay focused on what is possible in order to reinforce a sense of control and to reassure children that they are okay, and that the situation will get better.

It is very important to remember that children look to adults for guidance on how to react to stressful events. Acknowledging some level of concern, without panicking, is appropriate and can result in taking the necessary actions that reduce the risk of illness. Teaching children positive preventive measures, talking with them about their fears, and giving them a sense of some control over their risk of infection can help reduce anxiety. This is also a tremendous opportunity for adults to model for children problem-solving, flexibility, and compassion as we all work through adjusting daily schedules, balancing work and other activities, getting creative about how we spend time, processing new information from authorities, and connecting and supporting friends and family members in new ways.

There is no doubt that the closure of schools has put an added burden on women who were in most cases forced to stay at home with their children. Table 5.21 shows that mothers constituted 45 percent of the persons who were forced to stay at home with the children who could not go to school while grown up sisters constituted 13.50 percent. Table 5.21 fathers (3.25 percent) and brothers (4.50 percent) played limited roles in caring for children that were not in school.

Table 5.21: Percentage distribution of households according to the person who has been staying with the younger children at home since they have been out of school

Households	Percentage
Mother	45.00
Sisters	13.50
Father	3.25
Brothers	4.50
Extended relation	10.00
Nobody	6.50
Not applicable	17.25
Total	**100**

Covid-19 and Household Food Security

Restrictions on movement within Delta State and across the country is disrupting local and inter-state food supply chains and affecting the availability of food as well as labour markets and supplies of critical agriculture inputs. This has posed a challenge for food production and could jeopardize food security for most households, especially the poor and marginalized. Access to food is becoming increasingly difficult for the most vulnerable. As the covid-19 crisis unfolds, disruptions in domestic food supply chains, other shocks affecting food

production, and loss of incomes and remittances are creating strong tensions and food security risks in many communities. In effect the COVID-19 pandemic is having a devastating impact on already fragile livelihoods.

According to the recent World Bank projections, Nigeria is predicted to be one of the three countries with the highest increase in the number of poor people. About 5 million Nigerians are projected to be pushed into poverty because of COVID-19 and associated mobility restrictions and lockdown measures (World Bank, 2020; IMF, 2020). Food insecurity has been a major longstanding challenge in Nigeria, as reflected by Nigeria's high Global Hunger Index (GHI), low Food Consumption Score (FCS), and high-calorie deficiency (Global Hunger Index, 2019).The country also experiences significant seasonal and geographical food price fluctuations due to weather shocks to agricultural production, limited access to markets and infrastructure, and global food price volatility on imported staple foods. Disruptions in economic activities are likely to have direct repercussions on food security as household spending on food comprises 58 percent of household expenditures, with poorer households spending more than 75 percent of their resources on food. Impacts are expected to be most severe for poorer households in both rural and urban areas.

It is in this context that some selected indicators of food security challenges among households in the study area are examined in the next few paragraphs. Table 5.22 presents the report of respondents with respect to whether any of their adult household members had to skip a meal because there was not enough money or other resources to get food since Mid-March 2020. As shown in 5.22, 73.25 percent of the respondents reported that some members of their household had to skip a meal because there was not enough money or other resources to get food since mid-March 2020 while only about 26 percent reported that all members of their household had enough to eat during the period. Another indicator of food security explored with the respondents relates to whether their household ran out of food because of lack of money or other resources since mid-March 2020. Table 5.23 shows that the vast proportion of the households (77.75 percent) reported that they ran out ran out of food because of a lack of money or other resources since mid-March 2020. On the other hand, just 22.25 percent indicated that their household never ran out of money for food during the period.

Table 5.22: Percentage distribution of households according to whether they or any other adult in their household, had to skip a meal because there was not enough money or other resources to get food since Mid-March 2020

Households	Percentage
Yes	73.25
No	26.25
Total	**100**

Table 5.23: Percentage distribution of households according to whether their household ran out of food because of a lack of money or other resources since Mid-March 2020

Households	Percentage
Yes	77.75
No	22.25
Total	**100**

A further examination of the food security situation of the sampled households was carried out by asking them to respond to some statements reflecting the security food situation which they face. Households were turning to coping mechanisms that may have negative impacts in the medium and long run, especially in terms of nutrition and food consumption. Table 5.24 indicates that 33.50 percent of the respondents stated that they had difficulties eating enough food in relation to their normal ration. A greater proportion of the respondents (46.50 percent) reported that they skipped meals or ate less than usual during the period. Some of the respondents (6.25 percent) even reported that they went whole days without food while an insignificant proportion of them (1.25 percent) reported that they increased their food intake during the period. Finally, Table 5.25 tried to examine whether the surveyed households had a stock of food to meet their needs for one full month. Table 5.25 shows that 53.5 percent of the households had food stock for less than one or two weeks while 13.25 percent reported that they had stock of food that can last them for between three and four months. Furthermore, as indicated in Table 5.25, just 4.75 percent indicated that they had food stock that can last for more than one month.

Table 5.24: Percentage distribution of households according to their food Situation, since Mid-March, 2020

Households	Percentage
I had difficulties eating enough food i.e. my normal food ration	33.50
I skipped meals or ate less than usual	46.50
I went whole days without eating	6.25
I increased my food intake	1.25
No change	12.5
Total	**100**

Table 5.25: Percentage distribution of households according to the availability of food stock for the month

Households	Percentage
Yes, less than one to two weeks	53.5
Yes, three to four weeks	13.25
Yes, more than one month	4.75
None	28.5
Total	**100**

The findings of the quantitative survey as discussed above with respect to food security issues were corroborated by the expressions of key informant and focus group participants as summarised in various paragraphs below.

On difficulties they experienced going to food markets due to restrictions of movement some of them stated as follows:

> *"Yes. It was like that. There a time if the government task force sees you aside, you are in trouble."*
>
> *"It was a problem. Sometimes you will want to go market and the police will start pursuing you. At that time, it was very difficult to even get motor cycle to take you to the market"*
>
> *"Sometimes you go to the market and you won't be able to buy anything because thing were very costly. The transportation alone was another issue, it was very high. It really affected us who were widows and my market was not flowing as before."*

On difficulties in buying food due to most food markets being closed some of them stated as follows:

> *"Markets were closed for a long time. That also affected our feeding."*
>
> *"Yes. Because some of the things we usually buy were not coming forth and markets were closed. Later they now set up a place for market at certain days."*
>
> *"Not really, we were buying food from small shops around."*
>
> *"Yes, it was a big problem. They fixed days (Mondays, Wednesdays and Saturdays). If I don't have money on Monday for market, meaning I will stay till Wednesday and if I don't have on Wednesday meaning I will stay till Saturday and if peradventure I do not have on Saturday, it means I will go hungry for the full week and what I was not supposed to eat, I will have to eat. That is what is really affecting me since, I don't eat garri since I'm diabetic. We don't even eat to satisfaction, may be where I usually cook 3 cups before, I had to cut it to 11/2 cups. If I make a pot of soup for #1,000 before, as a result of the COVID19, I will just fine where I can see vegetable, I will pluck it, put crayfish and eat it. The COVID-19 really affected you severely."*

On their ability to buy the amount of food consumed because the price of food was too high some of them stated as follows:

> *"Yes. What you use to buy at #500 now rose up to #1,000. Thing became very high, not only food"*
>
> *"Prices of food items are on the high side now. I am not able to buy the quantities of food I normally buy because food price have gone up."*
>
> *"Prices were high. Before we were buying one cup of rice for #90 but now it is now #150."*
>
> *"I usually buy 1 basket before, now it is half that we buy because of the high price and you have five (5) people you feed at home, so how would you now make it. You have to now divide the Eba into small manageable sizes for the children to eat and then use water to fill the remaining spaces in our stomach."*

On their ability to buy the amount of food consumed because their households incomes dropped some of them stated as follows:

"Yes. It dropped. So, for this period we now minimize the amount of things we buy from the market because our household income has decreased."

"It affected my husband. My husband is a bike-man, and since there were restriction in movement and lockdown, my husband couldn't work and that affected our feeding."

"Yes. Because where I work, there was no payment of salaries, so it was difficult to buy the amount of food I and my household consume. It was really been difficult for my household since the COVID-19 came up."

"Yes, it affected me very well. I couldn't see money to continue my poultry farm, I had to now divert to baking. But baking things became very high. Eggs that we usually buy for #700 moved from #1,000 to #1,200. The flour we normally for #12,000 is now #15,800. As a result of that now, customer have reduced because prices of the finished products have increased. That is why I am not able to continue again."

On the availability of fresh food items (eggs, vegetables, meat, fish, etc) all the time in the in the markets/stores some of them stated as follows:

"Yes, they were available but the prices were high."

"Yes, they were partially available."

"They were available but their prices increased"

"Well, yes but not as before. Like where you usually have like 10 sellers before now reduced to five. It is the COVID-19 that has actually caused this."

On the availability of basic food items (rice, bread, garri, etc) all the time in the markets/stores some of them stated as follows:

"Not really. There was a time there was scarcity of garri, and when available, the price became very high."

"Not all the time. They were even hoarding the garri. You know that the garri is our local food that is what we were brought up with. The garri was scarce. It really affected me especially as a widow."

On whether household members noticed any changes in the costs of food items some of them stated as follows:

"Yes, drastic change since mid-March, 2020. COVID-19 has made prices of food too high."

"Up till now, the prices of food items go up every day. For example, the red oil rose up to #300 but just last week, it went to #350 and now to #400. Pepper that used to be #100 is now #150 and #200 because of the COVID-19."

"Yes, it has increased. What they were selling like #1,000 before now increased to #1,500. This was as a result of the coronavirus. People were not able to go to their farms to harvest. Transportation of good from one point to the other also increased."

Gender Dimension of covid-19

Throughout history, women and girls have been affected negatively and at a disproportionately higher rate by the outbreaks of epidemics and pandemics, and COVID-19 hasn't been an exception. Existing social and cultural norms and practices in Delta State that underlie structures of systemic gender discrimination and marginalisation glaringly manifest themselves. While the COVID-19 crisis affects everyone, women and girls face specific and often disproportionate economic, health, and social risks due to deeply entrenched inequalities, social norms, and unequal power relations. Although the data from the surveys as presented in the earlier sections of the report indicated various ways in which gender disparity is manifested by the covid-19 pandemic and the associated containment measure put in place by government, this section examines the gender dimensions of covid-19 pandemic based mainly on key informant and focus group discussions. Findings from the qualitative surveys show that the impact of COVID-19 on Delta State women and girls who continue to face structural, social, cultural and economic injustices is significant and overwhelming. The pandemic has added to the existing structural injustices creating a far deeper social, economic and humanitarian threat.

In the first place, women lack adequate access to information and health services particularly as it relates to covid-19. Traditional gender roles ascribed to women often means that they are primary care-givers for sick family members, a situation which exposes them to the risk of contracting and transmitting covid-19. The burden of unpaid care work on women and girls is exacerbated in these situations. The closure of schools further exacerbates the burden of unpaid care work on women and girls, who absorb the additional work of caring for children. At the same time, many women and girls living in rural areas and poor semi-urban settlements often have limited access to reliable information and adequate healthcare. As primary care-givers for sick family members, women's access to accurate and reliable information and their access to adequate healthcare is critical, to enable them protect themselves and their families from the virus. But information emerging from the surveys indicates that women do not have the opportunity of having access to relevant information compared with their male counterparts.

Second, women are more disadvantaged with respect to the negative impact of covid-19 as regards livelihood impacts. The steep decline in oil prices and the adverse impact of the pandemic on economic activity will have a profound impact on Nigeria's economy. Nigerian women are particularly vulnerable to economic recession as they are over-represented in insecure lower paid jobs in the informal sector and mainly operate small and micro enterprises to ensure their day-to-day survival. Furthermore, the direct implications of prevention measures, such as travel restrictions, have adversely impact livelihoods and economic security of women in the informal sector. However, the COVID-19 pandemic has a great negative potential to erase the gains made in this sector as women are confined to their homes. This has led to a substantially negative impact on the livelihoods of women and families in the region, particularly given the absence of social protection. While government-imposed restrictions on the physical movement of citizens are currently necessary, they tend to increase women's burden of household care, which leaves them with less time to access or choose potential livelihood options. This creates multiple economic disadvantages for women, which heighten their overall vulnerability to the pandemic.

Third, women are exposed to increased gender-based violence and protection risks as a result of covid-19 (Adetayo, 2020). Women and girls are at greater risk of experiencing increased

gender-based violence including domestic abuse, as a result of prolonged periods of confinement within homes and increased tensions within households due to economic hardships. Women's key role as food and nutritional needs providers to their families mean that Nigerian women who form a greater majority of Nigeria's informal economy workforce are the ones tasked with the risk of visiting informal market systems to purchase food items during this COVID-19 period. The food security and health risks for women and children has equally increased alarmingly within this period as women not only occupy nearly 70 percent of country's healthcare workforce but are generally expected to take care of the water and sanitation needs of the family which sometimes has women and girls travelling longer distances to collect enough water to adhere to frequent COVID-19 compliant hand washing. The closure of schools for an extended period is leading to increased drop-out rates among girls, which can increase the prevalence of child marriage in communities where early marriage is already widely practiced.

Finally, the front-line health professionals and workers most exposed to the infectious diseases are mainly women: nurses, nurse aides, teachers, cleaners and those providing care to the sick, though they are very often not at the forefront of decision-making in the management of health crises. This is even more so for the most marginalized women and girls, including women with disabilities, women in prisons and detention centers. Yet, understanding the specific needs and vulnerabilities of different categories of women and drawing on their contributions to shape planning response interventions and resourcing is necessary for attaining sustainable outcomes.

Conflict Dimension of covid-19

Conflicts and violence are not new in the Niger Delta region. The Niger Delta, the oil-producing core of Nigeria has for decades suffered from oil pollution which has led to the loss of livelihoods and sources of food for locals. The area has also been neglected by the federal government even though the bulk of the country's fund comes from the region. In the last decade, clashes between armed groups in the area and the security forces reached an all-time high; kidnappings were rife, and oil infrastructure destroyed at a phenomenal rate. Conflict and economic turbulence have been the key drivers of food insecurity in the region. Conflict can lead to displacements, loss of assets and livelihoods resulting in food insecurity and malnutrition of the affected populations.

The activities of Niger Delta youths agitating for equity in the share of the oil resources of the region coupled with associated inter-communal clashes, the herdsmen–farming community crisis and militancy, among others, have ravaged the region, leaving many dead and others displaced. Despite the challenges of the covid-19 pandemic, the activities of militant groups and herdsmen have continued to ravage the area. The Niger Delta dominant militant groups have often operated via kidnappings and oil bunkering. The herder–farmer conflict is associated with struggle over scarce resources, land ownership, proprietorship and community ownership. Herdsmen, who are typically from northern Nigeria, often migrate to the southern parts of the country in search of healthy and greener grazing pastures, which are now of very low quantity in the north. These herdsmen are often regarded as strangers in their new settlements, they encroach on the farms of the local people and their animals graze on (and destroy) the farmers' crops. This has mostly been the source of the crisis between the two groups, resulting in cattle rustling, killings, rapes, abductions and other atrocities.

Although the activities of bandits are not comparable to those of herdsmen during the pandemic, one thing is clear: security forces are not gaining traction with the herders at all. If a minimal level of success is being recorded against bandits, then it is almost no success with

respect to activities of herdsmen across the Niger Delta region. Herdsmen have continued to launch attacks on villages and local communities during the pandemic with no single apprehension yet – at least, not any brought to public purview. However, the pandemic seems to have reduced the number of casualties and incidents. This may be due to the fact that the farming season is yet to fully take off at the time of the survey and the lockdown has restricted movements that have kept most farmers at home.

The pains inflicted by herdsmen on local farming communities and villages continue to hit the locals very hard, even amidst the pandemic. Most communities in the Niger Delta region continue to complain about the nefarious activities of herdsmen, while appealing to the government to come to their rescue. As has been mentioned, no culprit connected to any of the herdsmen activities during the pandemic has so far been apprehended. The near future is likely to be more challenging in terms of the herders–farmers conflict and communal conflicts in the region, as the federal government continues to ease the lockdown and grant permits for farming activities to resume.

Another dimension of conflict and the covid-19 pandemic in the Niger Delta region as in most parts of Nigeria relates to violence associated with the resistance of the people to the restrictions in movement within and outside the region. People in the region felt that they have been denied of their rights being confined only in their houses, preventing them from hustling to meet their daily needs and restricting their freedom without providing them with commensurate palliatives or succour. Thus, they have often resorted to different forms of agitations in the form of protests and riots. It is assessed that the high incidents of protests and riots could fuel community transmission of the coronavirus in the region. Also, security threats such as violence against civilians which includes rape, sea piracy attack, abduction and torture was higher during the coronavirus period than before. This is assessed to have been precipitated by movement restrictions and inadequate security coverage of some areas which were exploited by criminals to perpetrate crimes on the innocent citizens who were mostly at home or within their neighbourhoods following closure of offices, businesses and hotels. There is no doubt that the region is still at high risk of such security threats if security coverage is not expanded and extended to remote areas and communities. The Niger Delta region is still at risk of the identified threats despite the easing of the restrictions and rolling out of palliatives to stimulate the economy. On the other hand, violent clashes, battles for supremacy or control of an area by gangs, inter/intra cult clashes and armed battles plummeted during the pandemic as a result of low level of social, cultural, and economic activities.

Covid-19 and climate change

In the Niger Delta region, severe movement restrictions during the pandemic have combined with existing food insecurity that was already high due to droughts, flooding and pest infestation. Similarly, in many parts of the Niger Delta, the pandemic is hitting especially hard in communities that were already suffering from a serious loss of livelihoods due to shifting rainfall patterns and extreme weather. In some localities militant groups have used the pandemic as another rallying cry for the recruitment of new members, especially in areas where climate change has contributed to a significant downturn in livelihoods. In these settings, the combination of climate-induced socioeconomic vulnerability and the negative impact of the pandemic is driving further armed group activity. Often policy makers treat COVID-19 and the impacts of climate change separately, rather than as a set of combined risks. Shifting resources from programs supporting livelihoods to programs delivering medical care may make sense at first glance, but ignores the interrelated nature of these crises. In the context of the Niger Delta

region, there are three components of the relationship between the pandemic and climate change.

First, widespread lockdowns, economic inactivity, especially oil exploitation and travel bans have resulted in a significant reduction in greenhouse gas emissions at least within the region. However, the reduction in emissions as a result of COVID and how this plays into the fight against climate change is obviously limited because we have to keep in mind that these closures are temporary. Businesses will re-open and they will be eager to recoup any losses made over the past few months. This potentially means, more production, an increase in manufacturing hours and consequently a jump in emissions in a relatively short span of time.

The second dimension is the dramatic rise in single use plastic. This is due to the demand for products to keep covid-19 at bay including masks, visors and gloves. This also includes plastic waste surges as restaurants struggle to keep their businesses afloat with home delivery services. Besides, the proliferation of single use plastic was already accelerating global climate change. Effectively, the impact of the pandemic will serve to intensify the pollution and climate issues associated with a rise in single use plastics.

The third dimension is one of finance. Economic recovery is a core component of the conversation around building back post covid-19. Mobilizing funds in the circumstances of competing socio-economic development needs, there is a chance that accessible climate finance will be compromised. This will have implications on the region's capacity to adapt to the ongoing negative impacts of climate change. The realities of covid-19 in relation to action on climate change are alarming. The unfortunate reality is that the long-term effects of climate change will be more disastrous than the current impacts of covid-19, with the region's most vulnerable populations bearing the brunt of these effects. This includes higher death rates and rampant economic decline as a result of harsher climate conditions. It cannot be stressed enough that the cost of inaction on climate change is catastrophic for the Niger Delta region and indeed other parts of Nigeria.

Chapter 6

Policy Issues and Recommendations

Although the number of covid-19 cases and fatalities might still appear comparatively low in Nigeria and some other parts of sub-Saharan Africa compared with other world regions, the looming health shock of covid-19 could have disastrous impacts on Nigeria's already strained health systems, and could quickly turn into a social and economic emergency. Nigerian policy makers and their partners should re-assess the trade-offs between short, medium, and long-term priorities. The needed policy measures and actions will continue to evolve as economies enter the successive phases of crisis-response: surviving the epidemic (ensure adequate resources go to basic needs such as medicine and food, and ensure people's physical and mental health, as well as safety); getting back to normal (support individuals and firms to resume their activities and repair the damage sustained during the pandemic); and re-focusing on the long term (shift resources and attention to long-term development). The various sections of this report have presented the damaging impact of covid-19 on food security, nutrition and the livelihoods of farmers, fishers and others working along the food supply chain. It also shows that the sustainability of food production and food marketing during and after covid-19 will depend, in large part, on policy responses over the short, medium and long term. It is in this context that a number of policy recommendations in response to the key findings of this research project are presented in this last chapter.

Local food production

(i) Support to livelihoods (agriculture, livestock, trade and informal businesses) to strengthen capacities for productivity enhancement including provision of subsidized inputs, value addition and market access to ensure food supply remains intact is essential. In the prevailing covid-19 environment, measures that will allow for business and market transactions to take place while observing social distancing prescriptions must be initiated and implemented.

(ii) To meet immediate needs of the most vulnerable population in rural communities, governments, non-governmental organisations and private sector actors should invest in food storage facilities in the rural areas and possibly create improvised food market channels for the rural populace to purchase essential food items at regular prices.

(iii) Non-profit organizations should as well facilitate the set-up of nodal processing centres for rural women in various localities to boost processing activities of crop produce. This is to enable livelihood and income diversification, as the process of sustainability relies on the resilience of rural women in post pandemic periods.

(iv) Food farmers in Delta State and indeed other parts of Niger Delta region should be empowered to see the covid-19 pandemic as an opportunity to boost local food sales, as food imports are restricted by government. There should be strategies to instil a sense of solidarity and pride on the local food farmers about being able to feed their compatriots.

(v) Strengthening local food production system resilience is critical for an effective response to the covid-19 pandemic. As international supply chains are strained by covid-19, delocalizing food production, or seeking a better balance between imported and locally produced food, is a sound strategy for building robustness and resilience.

(vi) More efficient, sustainable and resilient local food production systems require careful management of land, soil, and water through integrated approaches. Such food systems also require reduction of post-harvest food losses at every stage of the value chain with improved practices. These include access to low-cost handling and storage technologies, and packaging.

(vii) As many communities rely on markets, especially in urban settings, capacity for home food production and/or processing is limited, and local production systems are unable to cope with shocks. Therefore, governments need to increase household and community food production through distributing seeds, tools, and fertilizers for small rural farms and urban gardens before, during and after the pandemic. In addition, governments could help by providing local agricultural and livestock extension services and technical assistance.

(viii) Ensuring that agricultural actors and activities at all levels, particularly harvests, are not severely affected by the unintended consequences of the containment measures and restrictions on movement, while keeping safe the work environment of food producers and farm workers.

(ix) Ensuring that farmers have timely access to quality equipment and crop inputs, including seeds and planting material and ensuring that livestock farmers, including pastoralists, and fish farmers have access to corresponding inputs, such as animal feeds and access to pasture as well as quality fish inputs to support the aquaculture industry.

Marketing of local food

(i) Regular, consistent and concise communication with clear messages on the food situation is critical to reduce panic, maintain confidence in agriculture and food sector and feel secure about the availability of and access to food. People in rural and urban areas need information on market operations and good health practices when working and shopping.

(ii) Although every government will prioritize and coordinate actions based on their assessment of the situation, it is critical that governments prioritize local agricultural food system functions as an essential service that will continue to operate during periods of lockdown, emergency, curfew or other health containment measures.

(iii) Food marketing interventions must address all food system channels – modern, traditional (open markets, small stores) and informal (street vendors). Each channel serves different markets and parts of the population, helping to maintain a resilient food system that is imperative to minimizing the impact of covid-19 on society.

(iv) Just as governments need to address key regulatory barriers and policy responses that may undermine national and intra state food trade, so must they ensure that the movement of local food continues to flow unimpeded during the period of covid-19 restrictions.

(v) It is essential that food and nutrition care workers be protected against exposure to covid-19, in the same manner as front-line workers and other essential staff. This is particularly important where workers interact with the general public or with large numbers of people, as in wholesale markets, food processing plants, food pantries, or in close contact with clients. Special rules for social distancing, staggering hours, or mechanizing sorting and counting processes can be useful where masks and other personal protective equipment are in short supply.

(vi) Allow rural markets to operate with modest restrictions and precautions. Ensure farmers can farm, which may mean guaranteeing supplies of fertiliser, seed and fuel, and in some cases,

allowing seasonal labour to move for harvests. Remittances will probably fall, but for those still flowing, transmission from urban to rural areas must be facilitated.

(ix) For problems related to food spoilage from improper storage, governments could optimize the use of public and private storage facilities that could be used for emergency food stockpiling.

(x) Food availability at markets in urban areas is declining, especially for fresh perishable foods such as fruits and vegetables and animal sourced foods. Results seem to suggest that efforts should be made to ensure supply of these fresh foods to urban areas. As for most poor resource populations, informal markets deliver these foods, which suggest that efforts to enable these markets to continue or to find alternative ways to deliver these foods to urban households should be strengthened.

Food Security

(i) There is an urgent need for governments in Nigeria, technical experts, food producers, marketers, and other food market participants to share data, information and analysis to develop a stronger understanding of the pandemic's various effects on food security, nutrition and overall food system functioning in real time. To ensure thorough, timely collection and analysis of data related to food systems functioning, several options are available

(ii) In Nigeria as in many other countries, food security is handled largely at the national level. However, during a severe pandemic like this, national governments may be overwhelmed and may be unable to provide timely assistance to every affected region or state. During such an emergency, the most important for governments to focus on is effective planning.

(iii) As livelihoods of millions of people are likely are being disrupted, food insecurity is an urgent challenge. Among those that will require food services are expected to be urban poor populations affected by the lockdowns and are outside the purview of regular humanitarian caseloads. At the same time, humanitarian support to most vulnerable groups needs to be planned with supply chains for food commodities secured.

(iv) Federal and State Governments and other key stakeholders should ensure that the population must obtain the food they need, especially the most vulnerable individuals (infants, young children, women, elderly people, homeless people, people living with HIV/AIDS and other chronic illnesses, disabled people, and homebound individuals).

(v) To end restrictions on transportation and disruptions in markets that may quickly create shortage problems, governments and allied stakeholders should educate the public about the critical need to prepare for food shortages at the household level by promoting responsible levels of stockpiling, home production, canning and food preservation.

Household livelihood

(i) Knowledge of the pandemic is correlated with behaviour change. Recognizing gaps in current understanding of the pandemic will help define outreach priorities and target information to groups that need it most.

(ii) Federal and State Governments in Nigeria have made significant progress in communicating the lockdown strategy to its citizens and appealing for collective sacrifice to defeat the spread of COVID-19. Increased communication and transparency of the

Government's strategy on containment will be critical in gaining and maintaining national solidarity for government action.

(iii) Compromised livelihoods and especially reduced food consumption in many households call for urgent action. Safety nets and other economic and health policies are needed to address these shortfalls. Currently, few of survey respondents are receiving support from social safety net or palliative programmes. Moreover, policy options to provide a cushion for the poorest of the poor may face challenges due to lack of data and ability to clearly identify those that would desperately need help. These challenges highlight not only the importance of data collection to facilitate interventions but also collective efforts in a constrained environment.

(v) The Federal and State Governments should expand the coverage of existing social protection schemes to provide livelihood support directly targeted at vulnerable women (cash or food transfers), with priority attention to women in the informal economy and female-headed households

(vi) The Government, private sector and development partners should adopt affirmative procurement measures through the procurement of goods and services from women-owned businesses and cooperatives.

Gender

(i) Making women in rural environments more resilient – in other words, strengthen their ability to cope with and overcome the effects of covid-19 – is an indispensable item on public development policy agendas. The marginalisation of women from rural labour markets might become more accentuated, certainly so if they have to compete with men for the rare paid employment opportunities. The rate of women who work in the informal sectors - agriculture, livestock farming, fishing, trade and processing - is high, and they are the first at risk of losing their incomes in the current situation. Even if some of these women actively produce goods, they mainly do so for the purpose of marketing or processing them locally.

(ii) Women need to be supported in order to improve and secure their productive bases. They need access to good quality arable land, a sufficient supply of good quality water, and certified seeds. They need to be supported and encouraged to adopt sustainable production systems by means of incentives, like specially adapted agricultural insurance products, storage and preservation infrastructure. The resources and leadership capacities of community-based feminist and women's rights movements must be stepped up so that they can provide women a voice and make sure that their concerns are taken into account in the strategies for coping with Covid-19.

(iii) Between 50 percent and 60 percent of the food produced by women is intended for family consumption in the study area. Men, on the other hand, generally tend to farm crops for sale and/or the agro-food sector in order to secure an income for their families. Even if their role is often forgotten or little appreciated, women are the ones who mainly ensure their families' security of food supply. That is why it is so important to encourage and support them at every step of the value creation chain so that they can play their central role in rebuilding the policies for the security and autonomy of food supply while diversifying their sources of income.

(iv) The Federal and State Governments should support the development and dissemination of messages specifically targeted at and easily accessible by vulnerable women, including women with disabilities (through use of sign language, local language). Messages should recognize

women's roles as caregivers and communicate information on when and how women can access health facilities.

(v) Governments in Nigeria, and relevant communication bodies, including the National Orientation Agency, should partner with women's organizations, networks and local influencers to raise awareness and disseminate information to vulnerable women, including those in remote areas.

(vi) Social protection schemes need to put the needs of women at the forefront. Women often work as primary care givers at home and as frontline staff in health care. Programmes need to also identify and target vulnerable groups, including families who may resort to child labour as a coping strategy.

(vii) Identify the vulnerable groups in the informal economy who will be badly impacted by covid-19 (and in particular all those operating or using market places) and by gender-sensitive and non-discrimination policy measures to fight covid-19 in spite of the challenges to identify and reach the right people in the informal economy.

(viii) When it comes to food and nutrition security, women play a significant role in food production as well as transformation and food preparation. With school closed, women have an additional burden of care. Governments should sensitize men, boys and other non-gender binary people to consider splitting responsibility at home. Governments should also ensure that all measures and policies are gender-sensitive and do not further widen the gender gap.

(ix) Social protection services should also continue to operate and ensure sensitization against gender-based violence, which is at a risk of increasing with the social distancing and shelter-in-place measures.

(x) Community engagement teams established to support outreach efforts should be gender balanced and include young women. Existing structures through which women mobilize and lead, such as peace committees, camp management structures and cooperatives should be harnessed to shape and guide local response efforts.

(xii) The Federal and State Governments should systematically collect disability, age and sex-disaggregated data on the outbreak to facilitate more targeted and effective planning and implementation of the emergency response and to facilitate enhanced understanding of the gendered differences in prevention, exposure and treatment.

Conflict management

(i) An inclusive security approach in the volatile Niger Delta would ensure that the spike in violence in the home and harmful practices, such as child marriage, and sexual abuse as a result of the pandemic, are integrated through preventive measures into all response planning.

(ii) It is essential to use covid-19 as an opportunity for peace building in Niger Delta region through the following: 1. Considering the long-term impact of covid-19 interventions, and whether chosen approaches can help build resilience against violence beyond covid-19; 2. Building the covid-19 response in conflict-affected localities on existing local capacities for peace, and explore potential peace dividends in mitigating tensions, including transforming intergenerational and gender norms while ensuring that duty of care is upheld; 3. Facilitating coordination, cooperation, and learning across socio-economic and peace building sectors on

what works in responding to public health crises in conflict affected and fragile contexts in a durable way; 3. Accelerating gender inclusivity and the leadership of children and youth in covid-19 response and post-pandemic peace building recovery which should include providing opportunities for children and young people to meaningfully contribute to response efforts.

(iii) Reduce risks of covid-19 interventions aggravating existing conflict dynamics or triggering new conflicts by**:** 1. Continuing support to programmes addressing core drivers of conflict and fragility; 2. Ensuring that conflict sensitivity is applied systematically in all covid-19 response programmes; 3. Making incorporation of existing gender-sensitive conflict analysis a prerequisite in the design of on-the-ground responses to avoid doing harm; 4. Supporting funding recipients, including non-governmental organisations to acquire the necessary contextual knowledge and skills in strategic communication and conflict sensitivity to deliver an effective response.

(iv) In the context of the prevailing lockdowns, one way the momentum can be maintained is through existing local authorities, community peace actors and peace committees which are common in the Niger Delta region. Local actors that are embedded in communities can continue to work on sustaining peace processes even when professional peace builders are unable to gain access. For any peace process, what is important is that people keep communication open and sustained even during the pandemic. This can be through funding to facilitate activities in local communities. International peace builders can also provide remote mentoring and capacity building. International peace builders should also remain available to brainstorm with local actors when challenges are encountered. Local peace builders can be enlisted to stop the spread of the pandemic through their existing networks and knowledge of community relations to coordinate preventive responses. Local actors involved in peace building already have experience translating complex messages into local languages. This skill is very relevant in the fight against the pandemic in communities.

Climate change

(i) Resilience to climate change can be achieved through water and energy-saving irrigation, conservation agriculture, and controlled environment farming, livestock grazing management, energy-efficient cold storage, biogas production, and renewable energy. Conducive policies can help drive positive behavioural change and increase the attractiveness of sustainable and resilient alternatives.

(ii) The lesson of covid-19 therefore is that science can in fact be translated into urgent policy decisions if there is sufficient political will.

(iii) The response to covid-19 has been based on unprecedented government intervention, and almost universal social acceptance of the radical measures adopted by all. The same pragmatic approach is needed for climate policies.

(iv) Covid-19 has given rise to an uncontested recognition of the centrality of the state in managing the crisis. Covid-19 has demonstrated the urgent need to build state capacities. The same pragmatic approach is needed for climate policies.

(v) Funds required for climate actions do exist, and the same approach used to mobilize Covid-19 funds should secure even greater investment in a carbon-neutral economy.

(**vi**) A fundamental reason for the recognition of covid-19 threats and the limited recognition of climate change threats is that Covid-19 has been clearly understood, beyond the health impacts, as an immediate and present threat to global development, while climate change continues to be viewed as a long term and uncertain threat to some remote communities of the world. This conception and approach must change.

Conclusion

There is a need for governments at all levels in the Niger Delta region in particular and indeed other parts of Nigeria in general to develop better policies and strategies for reducing hunger post covid-19 pandemic in the country and improving food security. If appropriate actions are not taken, it is possible that some farmers may switch crop types, while some young farmers may move out of agriculture completely. Farmers in the country may need to adjust the seasonal calendar to be suitable to these changes, and organize planting calendar based on information from warning system and traditional knowledge in production is crucial to maximizing optimal conditions.

Even though covid-19 is an unprecedented crisis, Nigerian leaders and governments are urged to use covid-19 pandemic crisis as an opportunity to offshoot change to shaping the development of the agricultural sector for food security despite the fact that the pandemic is much more a health issue. Governments at the Federal and State levels must recognize the challenge of potential food shortage and responded aggressively to meet the food need of their population. There is no doubt that food security and safety net policies and programmes need to be enhanced in Nigeria.

The covid-19 crisis threatens the food security and nutrition of millions of people, many of whom were already suffering. A large global food emergency is looming. In the longer term, we face possible disruptions to the functioning of food systems, with severe consequences for health and nutrition. With concerted action, we can not only avoid some of the worst impacts but do so in a way that supports a transition to more sustainable food systems that are in better balance with nature and that support healthy diets – and thus better health prospects - for all.

COVID-19 infections are still on-going in Nigeria, and federal, state, and local policies are evolving to respond to the disease and to minimize the economic impacts. Therefore, policymakers at all levels need more evidence to assess economic impacts and weigh policy options. This is especially important as Nigeria moves from lockdown policies to policies aimed at promoting economic recovery, while also ensuring that measures are in place to mitigate further spread. The approach and findings presented in this study provide an early assessment of social and economic costs. Further and more sophisticated economy wide analyses are needed to evaluate policy options, especially as the initial economic shocks subside and markets begin to function again.

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