Feed the Future Nigeria Agricltural Policy Activity

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The impact of COVID-19 and associated shocks on agri-food SMEs along the poultry and fish value chains in Oyo State

Iveren J. Abagyeh-Igbudu, L. Saweda O. Liverpool-Tasie, Ben Belton, Oyinkan Tasie, Thomas Reardon and Osawe Wellington

Introduction and background

This policy research note summarizes the key findings from a study on the impact of **COVID-19** and associated policies on SMEs along the poultry and fish value chains in Oyo State.

With rapid rates of urbanization and increasing incomes, Nigeria has witnessed an expansion in animal protein consumption. This increased demand has generated an expansion of animal protein production, particularly poultry and fish. The poultry subsector in Oyo and southwest Nigeria has grown significantly over the last few decades; accounting for a majority of medium- and large-scale poultry farms (Padilla et al., 2021). Egg production in Nigeria is currently dominated by the large scale integrated commercial farms which are mainly private sector driven and are largely found in Oyo State (Oluowatusin, 2020). The subsector depends on a web of interrelated supply chains that cuts across Nigeria for inputs such as maize, medicines and feed.

Similarly, fish is another important subsector in Oyo State. It is a key source of livelihood for many enterprises engaged in the production, processing and distribution of fish products and associated inputs and services. Thus, Adeoye et al. (2020) describe the fish subsector as key for the reduction of hunger and poverty among the people of Oyo State. While fish farmers in Oyo predominantly specialize in catfish, other fish including Tilapia and Carp are also reared. Catfish produced in Oyo State travels all over Nigeria with key market destinations including Lagos, the FCT (Abuja) and several south eastern states (Omonona & Fregene, 2021).

Key messages:

- Though Oyo state did not implement a full lockdown in response to COVID-19, SMEs in the state were still significantly impacted by disruptions to their input and output supply chains, largely due to their interdependence on other states for inputs, output markets and other supporting services.
- The challenges firms faced in Oyo state changed from supply chain disruptions (due to lockdown in other states) to financial challenges due to lower demand and increased default in payment among customers and the increase sales on credit adopted by SMEs in response to the early challenges with market access.
- Only three percent (3%) of the study sample received any assistance. Of those who received any assistance, 100% of it was from their social networks and not government.

We leverage monthly data collected from 54 agri-food enterprises over 9 months (February 2020 to November 2020) to understand how the impact on business operations and employment varies for firms of different sizes (small and non-small) and how these impacts vary across different nodes of the supply chain; i.e. lateral (feed, chicks and fingerlings) upstream (e.g. farms), midstream (feed millers and wholesalers) and downstream (e.g. retailers).

The sample of 54 enterprises used for this study was selected using a modified snowballing approach. First, the study team facilitated a meeting between the state data collector and the Oyo State Ministry of Agriculture. The ministry builds and keeps a repository of key operators in the agricultural sector in the state. The ministry builds and keeps a repository of key operators in the agricultural sector in the state. The ministry provided the data collector with a list of potential respondents from the chicken and fish subsectors. At least one enterprise from selected nodes of the value chains was randomly picked. After a brief introduction, selected respondents were asked for their consent to be part of the study. They were then asked to provide additional names and phone numbers of other persons engaged in the same activity as them or another activity along the poultry and/or fish value chains. Once respondents were confirmed to be engaged in the particular activity ascribed to them and consented to be part of the study, the data collector made monthly calls to the respondents to collect the required data. Information on these business operation activities was collected monthly for the months of February 2020 to October 2020.

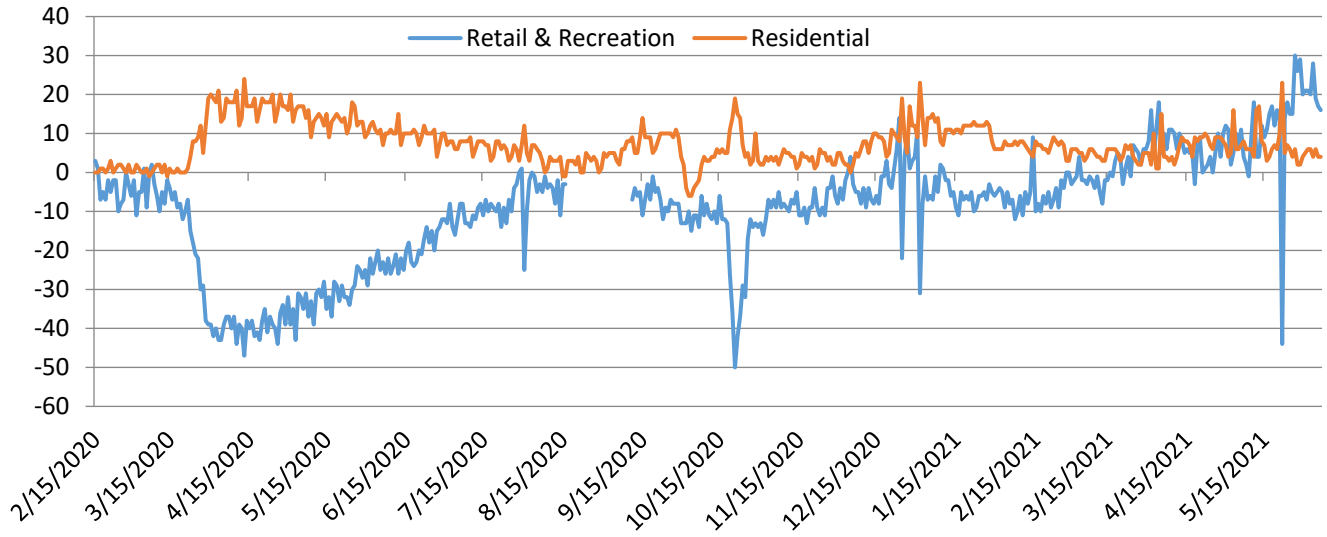
A summary of COVID-19 cases in Oyo State

On March 17th, 2020, Oyo Sstate recorded her first case of COVID-19 through a United Kingdom returnee (Usman, Ayinde, Akinyode, Gbolahan, & Bello 2020). Oyo State implemented her own lockdown policies and was one of the states with significant social distancing measures. A partial lockdown policy was implemented in Oyo State where retail wet markets and wholesale markets could operate every day but with a curfew from early evening through morning (Tasie, Reardon, & Belton 2021). Though full lockdown was not imposed in Oyo State, the state government on March 21st declared a state of emergency and closed down all public offices and educational institutions across the state, public offices, from March to the end of April were also closed (oyostate.gov.ng).

In April, the state government began an exercise of decontaminating and fumigating affected areas as a way of containing the spread of the corona virus (oyostate.gov.ng). At the end of June 2020 however, Oyo State recorded a total of 764 confirmed cases of COVID-19 and ranked fourth for confirmed cases in the country of confirmed cases. Statistics at the time of this writing this research note, has Oyo State at 7,731 confirmed cases (lab tested), 509 cases on admission, 7070 cases discharged and 152 deaths (NCDC Coronavirus COVID-19 Microsite, August 2021). Oyo State is among the six high burden states that have been placed on red alert by the Presidential Steering Committee (PSC) for the outbreak of the third wave of the COVID-19 in Nigeria (NCDC, 20 August 2021).

Figure 1 below presents the Google Mobility Index (GMI) of Oyo State from February 2020 to May 2021. This index shows how severely COVID-19 containment policies affected human movement and business enterprises. It measures visitor numbers to various categories of locations such as grocery stores, parks and train stations every day and compares this change relative to a baseline day before the pandemic outbreak. (Google, 2021). Figure 1 reveals that residential movement (i.e. staying at home) increased during this period and retail and recreation declined. This is reflected in spatial distribution of the greater Ibadan area that consists of 11 local government areas. The greater Ibadan area and has the highest number of informal small and medium scale businesses located in residential areas whereas large and corporate businesses and organizations are typically located in the central business districts of Ibadan (glassdoor.com). The dip in retail and recreation data likely reflects the closure of schools, public offices and, reduced movements during the curfew as well as and also due to the fear of scare about the COVID-19 pandemic.

Figure 1: Google Mobility Index (GMI) during periods of the pandemic in Oyo State



Source: Authors calculations

Three key findings on the impact of COVID-19 and associated policies on business operations in Oyo State.

> ***1. Though Oyo State did not implement a full lockdown in response to COVID-19, SMEs in the state were significantly impacted by disruptions to their input and output supply chains, largely due to their interdependence on other states for inputs, output markets and other supporting services.***

Table 1 below presents the average number of days businesses were in operation across the study months, by scale of business (i.e., small and non-small). We do not observe any evidence of reduced days of operation due to the lockdown. The average number of days of operation in March, April and May are very similar to those for February (pre-lockdown) and this is consistent across the nodes and for both small and non-small businesses. We see a slight increase in the average number of days that some categories of businesses (e.g., midstream and downstream) operated during the latter months (July to October 2020) compared to pre-COVID-19 levels in February. This is consistent with Figure 1 as the study sample consisted mostly of informal small and medium scale businesses. With the general decline in Nigeria, of incomes associated with COVID-19 and other economic factors in Nigeria (Onyeka and Ekuruche, 2020) these results might reflect the need for businesses to increase their days of operation to generate sufficient revenue to compensate for less sales associated with lower demand.

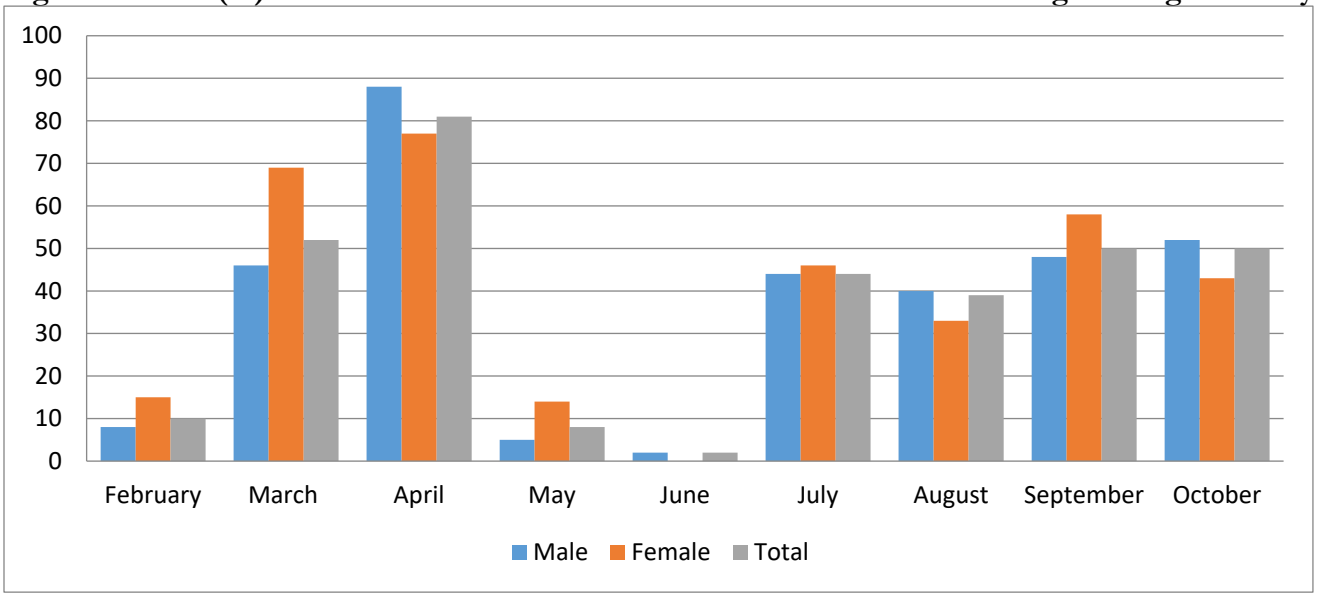
Table 1. Average number of days of operation of businesses during the study period

Business size & node	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct
Small									
Lateral	25	24	23	24	22	28	27	28	27
Upstream	25	27	26	29	26	28	24	20	21
Midstream	24	25	25	21	22	29	28	28	28
Downstream	24	24	25	25	25	28	29	28	29
Observations	26	26	26	25	26	32	29	25	21
Non-Small									
Lateral	27	26	28	26	26	30	29	28	29
Upstream	28	31	30	31	30	31	31	30	30
Midstream	22	22	22	25	25	29	28	29	28
Downstream	29	29	29	27	27	27	27	27	29
Observations	26	26	26	28	28	22	25	29	33

Source: Authors calculations

Though Table 1 reveals that there was no significant direct effect of the lockdown and COVID-19 restrictions on the days of operations of our study SMEs in Oyo State, Figure 2 shows that the share of SMEs reporting that they faced challenges increases significantly during the lockdown and movement restriction period (March and April of 2020). We find the spike in the share of businesses reporting challenges in March and April to be consistent across all business categories; male and female, small and non-small and also across businesses operating in the upstream (farmer and fisher) and non-upstream (hatcheries, traders, wholesalers, feed sellers, feed millers).

Figure 2. Share (%) of male and female owned businesses that faced a challenge during the study period



Source: Authors calculations

2. The challenges firms faced in Oyo State changed from supply chain disruptions (due to lockdown in other states) to financial challenges due to lower demand and increased default in payment among customers and the increase sales on credit adopted by SMEs in response to the early challenges with market access.

Figures 3 presents the nature of challenges they faced during the study period. Among those who faced challenges, the main challenges faced in March and April (during the lockdown in neighboring Lagos and Oyo and during the curfew in Oyo) are access to inputs and challenges accessing output markets. However, in the post lockdown months (July to October 2020) we see a prevalence of financial challenges (that could have resulted from selling most of their produce on credit to customers) and a persistence of challenges accessing inputs. For example, a small-scale fish farmer in Ibadan North LGA said

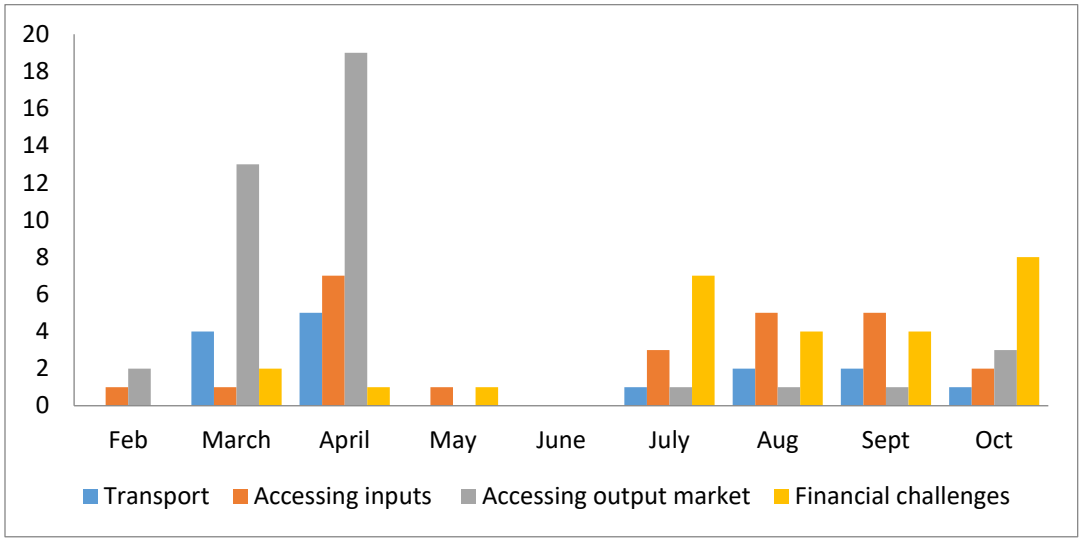
> *"The major customers I produce for are in Lagos. The lockdowns therefore affected my business very negatively as there was no demand for broilers from my customers. This necessitated processing the birds that had attained market weight and freezing them to reduce the cost of feeding them daily."*

Another respondent (a non-small chicken trader in Oluyole LGA) said

> "*Interstate travel bans affected delivery of products to major customers in the North and the East. Partial bank operations affected my business because when customers make payment to my account, it was extremely difficult to get funds from the bank to pay the hatcheries I buy chicks from because I don't do internet banking"*

These examples clearly illustrate how SMEs in Oyo State were severely affected by their dependence on other states for inputs and output markets. They also reflect the challenges associated with the disruption of lateral supply chain activities such as banking services.

Figure 3. Nature of challenges faced by businesses in Oyo State during the study period (% of businesses reporting)



Source: Authors analysis

We observe a general decline in the reporting of challenges in our sample for the months of May and June. Then there is resurgence in the share of businesses reporting challenges but at slightly lower levels compared to the initial period (during the lockdown in neighboring Ogun and Lagos states along with curfews in Oyo). Interestingly, we

also see that the main challenges reported in the later months (July to October) are now financial constraints and accessing inputs (Figure 3). On one hand, this might be associated with low demand during and post lockdown period (consistent with the high prices and livelihood shocks experienced across Nigeria which imposed financial difficulties on SMEs not able to make enough sales to generate adequate revenue to reinvest in their enterprises. This might also be due to the impacts on SME capital due to adaptation strategies used during the lockdown period to increase sales such as sales on credit.

We use a few examples from the respondents' description of their challenges in these later months to illustrate this point. A non-small feed seller in our sample from Lagelu LGA reported as his main financial challenge in April *"low cash flow, customers owing debt and not paying up."* A second respondent (small-scale fish farmer in Egbeda LGA) said she *experienced "Lower demand from customers and ridiculous pricing from customers".* A third respondent (a small-scale fish processor in Ibadan North LGA) said "*there was increased cost of processing items, which caused increase in cost of processing and sales price of products. This was difficult for the customers".*

3. Only three percent (3%) of the study sample received any assistance. Of those who received any assistance, 100% of it was from their social networks and not government.

Of the 37% of businesses that reported facing challenges during the study months, only 3% received any assistance. Table 6 shows the distribution of those businesses that received assistance. There was no significant variation between the scale of the business, gender of owner and whether the business was in the upstream or non-upstream grouping.

Table 2. Share of sample that received assistance during study period

Respondent category	Percentage receiving assistance (%)
Male	2
Female	3
Urban	2
Rural	0
Small	2
Non-Small	3
Upstream	2
Non-upstream	3
Overall	3

Source: Authors calculation

Of the 3% that received assistance, 92% was from friends and family and 8% of those were from trade organizations. No assistance came from government, NGOs, religious organizations or community organizations. In early May 2020, the Oyo State began the distribution of palliatives to her citizens. However, none of the businesses or individuals in the study sample were beneficiaries. Post COVID-19 (in September), the state urged MSMEs to access FG's Survival Fund. The state government launched a 1 billion Naira Oyo State MSME fund in June through the Oyo State Investment and Public Private Partnership Agency (OYSIPA) as a post- covid-19 recovery effort for small businesses in the state (oyostate.gov.ng).

Conclusions and policy recommendations

This policy research note summarized some key findings from a study on the impact of **COVID-19** and associated policies on SMEs along the poultry and fish value chains in Oyo State. Our findings reveal that although full lockdown policies were not implemented in Oyo State, SMEs in the state were still significantly impacted by

disruptions to their input and output supply chains largely due to their interdependence on other states for inputs, output markets and other supporting services.

The challenges firms faced in Oyo State changed from supply chain disruptions (due to lockdown in other states) to financial challenges due to lower demand and increased default in payment among customers and the increase sales on credit adopted by SMES in response to the early challenges with market access. Only three percent (3%) of the study sample received any assistance. Of those who received any assistance, 100% of it was from their social networks and not government.

It is therefore imperative that policy formulation strongly considers policies holistically as it affects citizens, production and distribution channels of products and services within the country. Regional considerations and state inter-dependence should be considered when policies are being designed and implemented. The importance of essential services for the smooth operation of food supply chains in Nigeria such as banking services and transportation should also be given adequate attention. It is also important to monitor the distribution of government support and incentives to ensure they reach the grass-root and those they were intended for.

Key References

Adeniji S.O., Ajayi, J.A., Amao, S.R., Aiyedun, J.O. (2013). Extent of commercial poultry production in Saki West Local Government Area of Oyo State Nigeria: A Case Study. *Transnational Journal of Science and Technology.* May 2013 edition Vol.3, No.5 ISSN 1857-8047

Adeoye, A.S., Oke, O.O., Eniola, O. and Jatto, K.A (2020). Assessment of gender roles in fish farming activities among rural farmers in Afijio Local Government Area of Oyo State, Nigeria. *A Nigerian Agricultural Journal* Vol. 51, No. 2 | pg. 411

Andama K., Edeha H., Obohb V., Pauwc K. and Thurlow J. (2020). Impacts of COVID-19 on food systems and poverty in Nigeria. *Advances in Food Security and Sustainability*, Volume 5 # 2020 Elsevier Inc. ISSN 2452-2635. Https://doi.org/10.1016/bs.af2s.2020.09.002

Fasakin I.J. and Omonona B.T. (2020). Resource use efficiency among rain-fed and non-rainfed catfish farmers in South West and North Central Nigeria

Hamzat O. A., Taiwo, O. D. and Ogunleye, B. T. (2020). Economics of egg production among poultry Farmers in Oyo State, Nigeria. *Nigerian Journal of Animal Science*. 2020, 22 (1): 225-232

Https://www.premiumtimesng.com/regional/ssouth-west/398487-why-oyo-is-seeing-surge-in-coronavirus-cases-governor.html. Accessed 12 August 2021

Https://www.premiumtimesng.com/regional/ssouth-west/398487-why-oyo-is-seeing-surge-in-coronavirus-cases-governor.html

Https://assets.kpmg/content/dam/kpmg/ng/pdf/advisory/impact-of-covid-19-on-the-nigerian-consumer-markets-sector.pdf. Impact of COVID-19 on the Nigerian Consumer & Industrial Markets. Publication date: April 2020. Accessed 4 November 2021

Https://oyostate.gov.ng/page/14/?s=covid-19&cSubmit=Submit, Accessed 20 August 2021

Https://www.glassdoor.com/Explore/top-companies-ibadan_IL.14,20_IC2481792.htm

Nigeria Centre for Disease Control (ncdc.gov.ng), Accessed 20 August 2021

Olagunju I., Adesiyan I. and Ezekiel A. (2007). Economic viability of cat fish production in Oyo State, Nigeria. *Journal of Human Ecology*. 21. 10.1080/09709274.2007.11905961.

Oluwatusin F., Abiodun A., Osundare F.O., Oluwatusin F.M., Toluwase S.O.W., Adekunmi A.O. and Abdu-Raheem K.A. (2020). Technical efficiency of poultry egg production in Oyo State of Nigeria: A Stochastic Frontier Approach. *International Journal of Innovative Research and Advanced Studies* (IJIRAS) Volume 7 Issue 5, May 2020.

Omonona B.T. and Fregene (2020). Initial Report of Aquaculture Value Chain Assessment in Oyo State, Nigeria.

Onyeka C. and Ekuruche M.A. (2020). Understanding the impact of the COVID-19 outbreak on the Nigerian economy. Https://www.brookings.edu/blog/africa-in-focus/2020/04/08/understanding-the-impact-of-the-covid-19-outbreak-on-the-nigerian-economy/. Accessed 4 November 2021.

Padilla S.L., Tasie L.S.O.L and Myers R.J. (2021). The Effects of Feed and Energy Costs on Broiler Farm Decisions: A Dynamic Programming Approach. Agricultural Economics. 2021;1–16. https://doi.org/10.1111/agec.1261

Tasie L.S., Reardon T. and Belton B. (2020). "Essential non-essentials": COVID-19 policy missteps in Nigeria rooted in persistent myths about African food supply chains. *Applied Economic Perspectives and Policy*. DOI: 10.1002/aepp.13139.

Usman A. B., Ayinde O., Akinyode A., Gbolahan A., and Bello B. (2020). Epidemiology of coronavirus disease 2019 (COVD19) outbreak cases in Oyo State South West Nigeria, March-April 2020. *Pan Africa Medical Journal*. 2020;35(2):88 DOI: 10.11604/pamj.supp.2020.35.2.23832.

Authors:
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