

Nigeria Agriculture Policy Activity

The impact of COVID-19 and associated shocks on Agri Food SMEs along the poultry and fish value chains in Kebbi State, Nigeria

Adejoh E.U., Elizabeth Yusuf James., L. Saweda. O. Liverpool-Tasie, Ben Belton, Oyinkan Tasie, Thomas Reardon and Wellington Osawe

Introduction and Background

This policy research note presents 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 Kebbi State. Over a 9-month period (February 2020 to November 2020), data was collected from agri-food enterprises to understand how the impact of the COVID-19 pandemic affected business operations and how these impacts vary for firms of different sizes and across different nodes of the supply chain; i.e., lateral (feed mills, hatcheries and feed seller) upstream (e.g., farms), midstream (feed millers and wholesalers) and downstream (e.g., retailers).

Kebbi State is located in the north-western part of Nigeria and occupies a land area of about 36,229 square kilometers. The State has a population of about 4,387,096 (NPC, 2006) and lies between latitudes 10° 051 and 13° 271N of the equator and between longitudes 3° 351 and 6° 031W of the Greenwich. Kebbi State is an important hub serving numerous states in the north as well as neighboring countries. The state shares an international border with the Republic of Benin and the Republic of Niger to the West and North respectively. It also shares domestic borders with Sokoto, Zamfara, and Niger States. Over two-thirds of the population are engaged in agricultural production, mainly arable crop alongside cash crops with animal husbandry. The State has an estimated livestock population of about 993,454 cattle, 2,166,920 sheep, 3,077,522 goats and 7,376,045 chickens (NAERLS AND FMARD, 2019).

The poultry industry is now an important business in Kebbi; split into several operations including grandparent stock (GPS) and parent stock (PS) farms, hatcheries, broiler and cockerel farms for meat production, and pullet farms for table egg production. (Saliu *et al.*, 2015). These farms use a broad range of inputs (for feed and animal care) and supply a broad range of output market channels. Thus, they depend on multiple other economic agents within and across state borders. In just one year (between 2018 and 2019), the population of chickens produced in Kebbi state increased by almost 7% (NAERLS AND FMARD (2019)).

Key Messages:

- Though Kebbi State did not implement a 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 Kebbi State changed from supply chain disruptions (due to reduced vehicular movement from other states supplying inputs) to high cost of inputs
- Only four percent (4%) of the study sample received any assistance from Government. No respondent received any other form of support.



Kebbi State is also an important state for fish supply. Over 100,000 fishermen in over 500 fishing settlements exploit the water bodies in the State and Capture fisheries is practiced by peasant fishermen, who cannot afford to purchase some of the necessary fishing inputs due to lack of capital (Kebbi State Ministry of Animal Health, Fisheries and Husbandry, 2014). Through a meso inventory of actors along the fish value chain, Gona et al (2018) found a rapid expansion in fish production in Kebbi State with an increase of over 180% in fishers with the rate of growth fastest in Yauri (192%) in the South, and slowest in Bunza (171%) in the North. They also found an even faster rate of growth in fish farmers, growing more than 200%, between 2008 and 2018. (Gona *et al.*, 2018).

Data

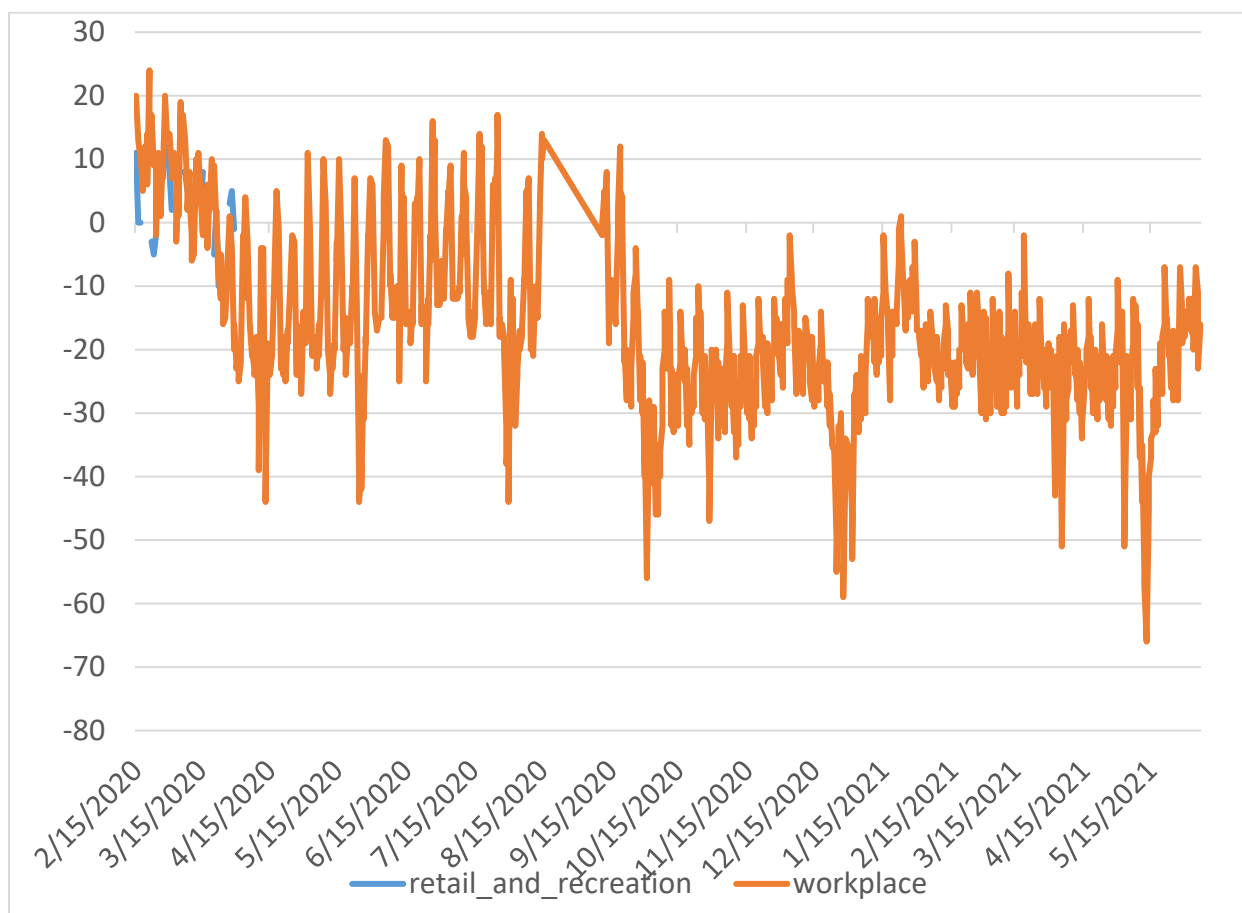
A snowball approach was used to get the sample of the enterprises used for this study. First, the study team facilitated a meeting between the state data collector and the Kebbi State Ministry of Agriculture. The ministry keeps a repository of key operators in the agricultural sector in the state. The ministry provided the data collector with a list of potential respondents from the chicken and fish subsectors. The selected nodes were fish, chicken and egg retailers (Downstream); feed mills, feed sellers, fish hatchery and chicken hatchery (lateral supply chains). 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 persons engaged in the same activity as them or another activity along the poultry and/or fish value chain. The data collector also reached out to professional associations and networks operating in the study locations in the search for more respondents. Once potential 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. The first section of the interviews collected location and characteristics of business owner data. This was supplemented by information on the business operating days, input use decisions, input prices, sales decisions, prices, challenges and if they received any assistance. 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 Kebbi State

The index case of COVID-19 in Kebbi State was announced on 26th day of April 2020. The number of reported cases in Kebbi State as at the 20th day of August 2021 was 450 with 16 deaths (NCDC, 2021). Though the Federal Government imposed restrictions on movement in the Federal Capital Territory (Abuja) and other states such as Lagos and Ogun State, there was no lockdown throughout the pandemic in Kebbi State in 2020. Thus, people in the state were allowed to carry out their day-to-day activities though they were cautioned to observe precautionary measures against the COVID-19 pandemic (Nation newspaper, 2020; PM NEWS, 2020; Information Nigeria, 2020).

Figure 1 below shows the movement for the retail/recreational and workplace indexes. It shows the 2020 and 2021 Google mobility index (GMI) for Kebbi State. It reflects the indexes of retail and recreation and workplace in the state. Though there was no lockdown in the state, there was still a sharp drop in travel to and from workplaces from March to early May, then a gradual recovery to slightly below pre-pandemic levels by end of July. This decline in travel to workplace likely reflects reduced movements due to the fear about the COVID-19 pandemic and the use of strategies such as working from home and/or use of social media to expand product lines adopted by various businesses across the country (UNDP, 2021). Surprisingly, we note a slump from August to October from which there was no full recovery to pre-pandemic levels even as at May, 2021.

Figure 1 .Google Mobility Index (GMI) during periods of the pandemic in Kebbi State



Source <https://www.google.com/covid19/mobility/>

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

- 1. Though we observe significant reduction in the movement of people in Kebbi State that corresponds with the rise of concerns about the pandemic in Nigeria, we do not observe a decline in the average number of days of operation of firms across different nodes of supply chain**

Table 1 shows the average number of days businesses were in operation across the study months by scale of business and across nodes of the fish and poultry value chains. We find that the average number of days of operation in March, April and May (the months when many other states had lockdowns) are very similar and/or higher than in the month of February (prior to the surge of concern about the pandemic across Nigeria) and this is consistent across the nodes and for both small and non-small businesses. This is not surprising since Kebbi State did not have a lockdown. Contrasting these findings with the information from the Google mobility index (Figure 1), it appears that even though the Kebbi State government did not impose strict lockdown measures (thus not disrupting the

opportunity for businesses to operate), residents of the state responded to the call for adhering to necessary COVID-19 safety protocol by limiting movements to likely essential activities. However, we note a reduction in the average number of days of operation in the months of August and September for upstream nodes (farms) for both small and non- small enterprises, though this was short lived as business operations resumed fully for both groups of enterprises in October.

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

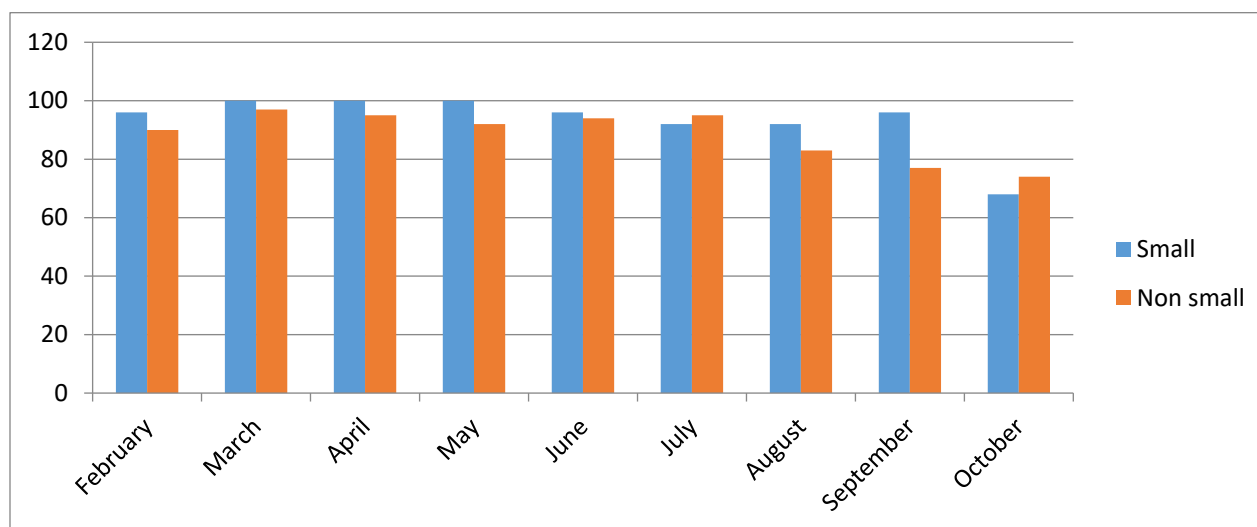
	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct
SMALL BUSINESS									
LACTERAL SC	21	27	25	27	30	30	30	30	30
UPSTREAM	23	24	20	18	14	17	14	15	26
MIDSTREAM	27	29	27	23	30	30	23	23	15
DOWNSTREAM	25	26	26	23	22	19	19	22	26
Observations	25	25	25	24	24	25	24	25	25
NON-SMALL BUSINESS									
LACTERAL SC	27	28	28	28	30	30	30	30	31
UPSTREAM	26	30	28	30	30	25	14	13	21
MIDSTREAM	26	27	28	25	30	27	28	27	25
DOWNSTREAM	26	28	28	26	27	24	23	29	26
Observations	39	39	39	39	35	39	36	35	35

Source: Authors Calculations

2. Despite the fact that there was no lockdown in Kebbi State, businesses still reported challenges associated with disruptions to their supply chain.

Figure 2 shows the share of businesses facing challenges by scale of operations over the study months. We find out that majority of businesses in Kebbi State reported facing challenges even prior to the surge of concern about COVID-19 in Nigeria. In February, over 90% of small businesses and about 85% were reported to have faced challenges. There was a slight increase in the share of businesses reporting challenges in the month of March to May, after which we note a continuous decline (July to October) in the share of businesses reporting challenges, particularly among the non-small businesses.

Figure 2. Share of businesses that faced challenges during the study period



Source: Authors Calculations

To get a better sense of the pattern of challenges faced by agri-food SMEs along the poultry and fish value chains in Kebbi State over the study period, we explore the nature of challenges faced by SMEs in Figure 3. Over the study months, firms in Kebbi State experienced different kinds of challenges with the most prevalent challenges being (1) the high cost of inputs and (2) low demand for products. Though high input costs was consistently among the top two most frequently cited challenges reported by respondents between February and May, it became the most common challenge by far (compared to other challenges) from June onwards. The challenge of high input cost was partly due to the restrictions imposed by the federal government and other states that disrupted access to inputs coming into Kebbi from other states. This shortage of inputs led to a rise in the price of inputs. For example, a chicken retailer (non –small) from Birnin Kebbi said that

“...The higher prices of inputs is as a result of blocked roads which impeded movement of vehicles on normal routes bringing in inputs from neighboring states...”

Another respondent, a fish retailer from Jega also said

“...The price of fish was so high and so I could not buy as much as desired...”

The second most commonly cited challenge was low demand for products. This challenge for many businesses was also due to their inability to reach their markets in other states. For example, a chicken trader from Unguga (non –small) also reiterated that

“...There were low sales of product because of closed borders with Niger clients....”

In response to the challenge of low demand, some respondents resorted to selling on credit to keep their businesses going. The impact and sustainability of this coping strategy remains in question. A respondent from Birnin Kebbi (non –small feed seller) said:

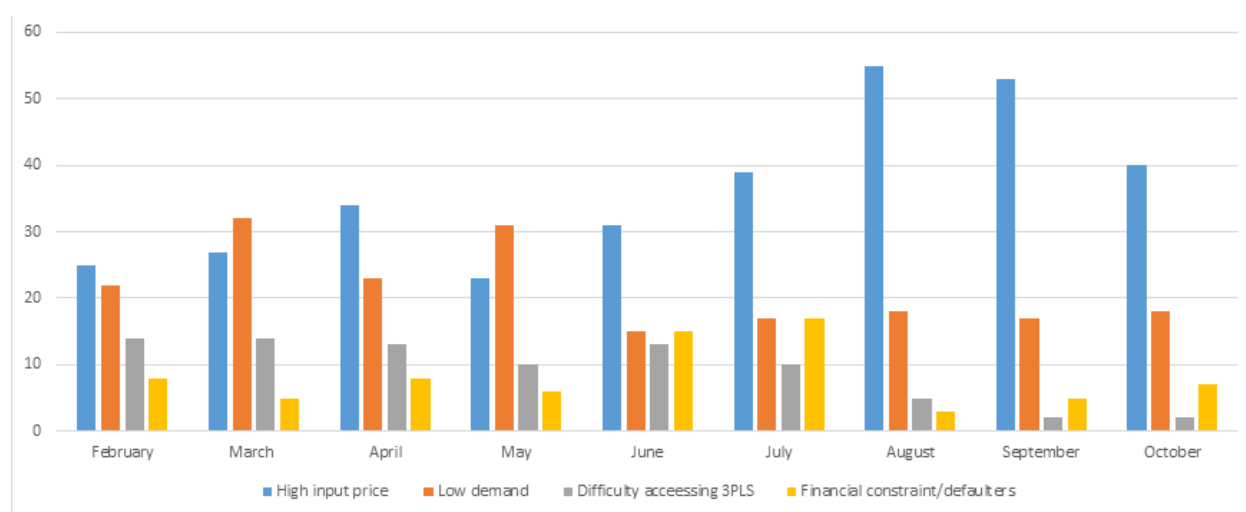
“...High cost of feed and also lots of creditors, low sales, selling at loss but I needed to keep the business going

In addition, a chicken farmer (non – small) said that,

“...recovering funds from creditors at this period has been difficult and I do not have funds to continue the business, may resume operation soon....

Together, these results indicate that though businesses in Kebbi State were allowed to continue their activities unhindered by movement restriction policies, many businesses still faced challenges accessing inputs (which led to higher prices) and their output markets due to the spatial interconnectedness of their product and input supply chains across state borders.

Figure 3. Share (%) of respondents facing different kinds of challenges in Kebbi State during the study period



Source: Authors Calculations

3. Among the sampled respondents receipt of assistance was extremely limited

The results from the survey showed that businesses faced various degrees of challenges during the pandemic but only 4 % of the small number of respondents received a form of assistance from Government, which was in the month of August.

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 Kebbi State. Our findings revealed that although no lockdown policies were implemented in Kebbi 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 and countries like Niger for inputs and output markets. The challenges firms faced in Kebbi were high cost of inputs, low demand

of their products and financial constraints due to adopting strategies such as sales on credit to maintain the level of sales in a context of low demand. This study revealed that despite the challenges the Agri food SMEs faced, there was very little assistance from Government, only four percent (4%) got assistance. These findings suggest that a holistic consideration for policy formulation is necessary when dealing with shocks such as COVID-19. For example, regional, national and state inter-dependence should be considered in policy design and implementation. It is also important to monitor the distribution of government support and incentives to ensure they reach those they were intended for.

Key References

Allen K, Rachmi AF and Cai J. (2017), Nigeria: Faster aquaculture growth needed to bridge fish demand–supply gap. *FAO Aquaculture Newsletter*, 57:36–37.

Balana, B. B., Oyeyemi, M. A., Ogunniyi, A. I., Fasoranti, A., Edeh, H., Aiki, J. and Andam, K. S. (2020). The effects of COVID-19 policies on livelihoods and food security of smallholder farm households in Nigeria: Descriptive results from a phone survey. IFPRI Discussion Paper 1979. Washington, DC: International Food Policy Research Institute (IFPRI). <https://doi.org/10.2499/p15738coll2.134179>

(FAO) Food and Agriculture Organization of the United Nations (2021). National agrifood systems and COVID 19 in Nigeria Effects, policy responses and long-term implications *Information Nigeria* (2020). 23rd April, 2020

Gona A, Woji G, Norbert S, Muhammed H, Liverpool-Taste LSO, Reardon T and Belton B. 2018. The rapid transformation of the fish value chain in Nigeria: Evidence from Kebbi State. <https://www.canr.msu.edu/fsp/publications/researchpapers/fsp%20research%20paper%20115%20fish%20kebbi.pdf>

NAERLS and FMARD, (2019). *Wet Season Agricultural Performance in Nigeria*. NAERLS Press, Zaria.

National population Commission (NPC) (2006). *Population Figures for thirty-six states of Nigeria and Federal Capital Territory*. Retrieved March 7, 2017 from <http://www.population.gov.ng/index.php/state-population>

Nation newspaper (2020). thenationonlineng.net

[Nigeria Centre for Disease Control \(2021\). NCDC Coronavirus COVID-19 Microsite](#)

[PM NEWS \(2020\). 23rd April, 2020](#)

Saliu, L. A., Abdulrazaq, S. A. and Eleke, P. N. (2015) Production Efficiency of Poultry Egg (Layer) Production in Chikun and Igabi Local Government Areas of Kaduna State, *Nigerian Journal of Agricultural Economics* (NJAE). 6(1):40-52.

United Nations Development Project (2021). The impact of COVID – 19 on business enterprises in Nigeria
The%20Impact%20of%20COVID19%20on%20Business%20Enterprises%20in%20Nigeria%20(1).pdf

About the Authors:

This research note was a product of collaborative research funded by the CGIAR Research Program on Policies, Institutions, and Markets (PIM) and the USAID Nigeria mission under the Feed the Future Nigeria Agricultural Policy Activity. The lead author, Adejoh, Emmanuel Ugbede is a researcher at the National Agricultural Extension and Research Liaison Services (NAERLS/ABU Zaria) and a participating scholar of the NAPA early career mentoring program. He is currently pursuing his PhD in Agricultural Economics at ABU Zaria. Elizabeth Elizabeth Yusuf James is a researcher at the National Agricultural Extension and Research Liaison Services (NAERLS/ABU Zaria) and a participating scholar of the NAPA early career mentoring program. She is currently pursuing her MSc in Agricultural Economics at ABU Zaria. L. Saweda. O. Liverpool-Tasie, Ben Belton, Oyinkan Tasie and Thomas Reardon are all faculty at Michigan State University and Wellington Osawe is a postdoctoral research fellow at the Economic and Social Research Institute (ESRI) and a visiting research fellow at Trinity College Dublin. The authors would like to appreciate Prof. Chris Daudu, Prof Emmanuel Ikani (Executive Director, NAERLS) and Mr. Steve Longabaugh for their support in the coordination of the associated training and mentoring sessions necessary for the production of this research policy note.

This work was a product of collaborative research funded by the CGIAR Research Program on Policies, Institutions, and Markets (PIM) and the USAID Nigeria mission under the Feed the Future Nigeria Agriculture Policy Activity. The contents are the responsibility of the authors and do not necessarily reflect the views of the funding agencies.

Copyright © 2021, Michigan State University, and the International Food Policy Research Institute. All rights reserved. This material may be reproduced for personal and not-for-profit use without permission from but with acknowledgment to MSU, and IFPRI.

Published by the Department of Agricultural, Food, and Resource Economics, Michigan State University, Justin S. Morrill Hall of Agriculture, 446 West Circle Dr., Room 202, East Lansing, Michigan 48824.